# Understanding the Early Years

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# Early Childhood Development in Prince Albert, Saskatchewan

**KSI Research International Inc.**
Applied Research Branch
Strategic Policy
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# Executive Summary

*Understanding the Early Years* (UEY) is a national research initiative. It provides communities with information to enable them to make informed decisions about the best policies and most appropriate programs for families with young children. It seeks to provide information about the influence of community factors on children's early development and to improve the community's capacity to use the data in monitoring child development and creating effective community-based responses.

This report is one of five community reports describing children's outcomes and explaining them in terms of three factors: family background, family processes, and community factors. Children's outcomes were assessed in three major categories: physical health and well-being, cognitive skills, and behavioural measures.

Each evaluation comprised several measures.

- *Family background* includes information on the parents' income, level of education, and occupational status.
- *Family processes* include positive parenting practices, engagement in learning activities, family functioning, and maternal mental health.
- *Community factors* include social support and social capital, neighbourhood quality and safety, use of recreational, cultural, and educational resources, and residential stability.

**The children of Prince Albert are fortunate, because a base of family and community support for the early years has already been established. There is, however, room for improvement. With decisions based on research evidence, effective practices can be developed and Prince Albert can continue to work toward achieving the goal of ensuring that every child enters school with the best possible chances of success.**

Data for these reports were derived from several sources:

- The *National Longitudinal Survey of Children and Youth* (NLSCY) *Community Survey* is a national instrument used to gather data directly from parents and children concerning the health and well-being of Canada's children 5-6 years of age.
- The *Early Development Instrument* (EDI) is based on a teachers' checklist of their kindergarten students' readiness to learn.
- The NLSCY and EDI data collected from the UEY sites allows comparison across the five UEY communities. Where possible, the outcomes of the children in this community were compared with averages for their province and for Canada as a whole. If data was not available at those levels, the outcomes of the children are compared across the five UEY communities of

Southwest Newfoundland; Prince Edward Island; Winnipeg (School Division No. 1), Manitoba; Prince Albert, Saskatchewan; and Fraser North, British Columbia.

Prince Albert is one of the first five sites for the UEY initiative. Valuable lessons will be learned about the needs and strengths of communities with different economic, social, and physical characteristics, and about how they are each working to improve their young children's outcomes. Community-based research is important because it allows a community to understand how well its youngest citizens are developing and lends insight into which factors contribute to success and which warrant further consideration.

# Study Highlights

In Prince Albert, approximately 35% of families were considered low-income, compared to about 25% in Saskatchewan, and 22% in Canada overall. Some 34% of families are of Aboriginal origin, and about 28% of families were headed by a single parent. One of the study's surprises is that the spatial distribution of children's outcomes does not match socio-economic status patterns. Many children in low-income areas are faring quite well. It is also important to note that the results for Prince Albert are bi-modal, based on the urban and rural areas.

Using three tests, the NLSCY found that children in Prince Albert scored slightly above the national average on positive behavior, but below the national average on direct assessments of their vocabulary and cognitive development.

The Early Development Instrument found that on two of the five domains, social knowledge and competence and communication skills and general knowledge, children in Prince Albert scored above the average of all children evaluated in 1999-2000. They scored below on physical health and well-being, emotional health and maturity, and language and cognitive development compared to the average of all children evaluated in 1999-2000. Overall, children scored consistently higher in the rural areas compared to urban areas.

Based on the community indicator scores for the combined average of the first five UEY communities, use of resources was low for the average on the first five UEY communities, 3.2 on a 10.0 point scale. Similarly, Prince Albert scored 3.1 on a 10-point scale for use of resources.

Prince Albert had high scores on wider community indicators describing its levels of social support, social capital, and safety of its neighbourhoods, despite relatively low levels of socio-economic status. The children of Prince Albert were healthy and showed strong signs of positive development and readiness for learning.

Prince Albert can take pride in the success of its youngest children. However, there is room for improvement. The parents in this community had lower scores on parenting skills and parental engagement. Given this, and the relatively high prevalence of children with behavioural problems, the results suggest that many parents would appreciate and benefit from parenting courses and other support measures. Many parents in Prince Albert also reported low levels of engagement in learning activities at home, and strategies which help parents become more engaged are likely to help improve children's outcomes.

The role of positive parenting is particularly important. It explained 37% of the differences in physical health and well-being scores, and 131% of the differences in behaviour scores. This latter number for parenting had the highest explanatory power among all communities in explaining behaviour scores.

The family and community indicator scores for Prince Albert were higher than the average for the first five UEY communities on 4 of the 10 measures used: family functioning, social support, social capital, and neighbourhood safety. Moreover, their scores were high on maternal mental health, 8.8 on a 10-point scale, the same as the combined average for the first five UEY communities (8.8 on a 10-point scale). The total score out of 100 for family and community indicators for Prince Albert was 66.7, slightly below the average for the five UEY communities, which is 66.9.

# Acknowledgements

This report was prepared by J. Douglas Willms, with the help of Rick Audas, Shawn Dalton, and George Frempong. The author is grateful to the staff of the Applied Research Branch for comments on drafts of this report; and to Sarah Connor, whose report on the UEY project in North York (the prototype community) provided a useful starting point. The author is pleased to acknowledge Linda Nosbush, the community research co-ordinator for Prince Albert, who provided demographic highlights, maps of Prince Albert, and information on local services and resources. Without Ms. Nosbush's assistance, the study would not have been possible.

The author would also like to thank Magdalena Janus for her feedback on the EDI analysis. Magdalena Janus, along with Dan Offord and the Canadian Center for Studies of Children at Risk, developed the EDI described in the first chapter of this report.

# 1. Introduction

## A. What this study is about

Understanding the Early Years (UEY) is a national research initiative that provides information to help strengthen the research capacity of communities to make informed decisions about the best policies and most appropriate programs to serve families with young children. It seeks to provide information about the influence of community factors on young children's development, and to enhance community capacity to use these data to monitor early childhood development, and to create effective community-based supports. Data describing the outcomes of children ages 5 and 6, as well as the family and community environments in which they live, were collected from three sources: their parents, their teachers, and from the children themselves.

This research report is one of five community research reports describing children's outcomes and explaining them in terms of three factors: family background, family processes, and community factors. Children's outcomes were assessed in three major categories: physical health and well-being, cognitive skills, and behavioural measures.

The data for all five community research reports were based on the National Longitudinal Survey of Children and Youth (NLSCY) and the Early Development Instrument (EDI) assessments. This means that the samples drawn in each of the first five communities were based on families with children ages 5 and 6 who were given both of the NLSCY and EDI assessments.

In order to understand the performance of the children in this community based on the EDI, the results are compared to a larger EDI sample of about 28, 250 children, drawn from selected communities. Although this sample – referred to as EDI – 16, is not truly national or representative, it provides a means of comparing children in this community with other 5-6 year old children. The numbers for the EDI-16, are different from those used in the EDI monitoring report.[1]

The results from the NLSCY assessments taken by the community children are compared with the national means, developed from the national survey, which has a nationally representative sample.

There is increasing evidence to support the importance of investing in the early years in children's development. New research shows that these formative years are critical, and that the kind of nurturing and stimulation that children receive in their early years can have a major impact on the rest of their lives.

Evidence also suggests that neighbourhoods and communities where children grow and learn directly influence their development. They affect parents' ability to provide the best possible family environment, and the ability of schools to offer the best possible education.

Neighbourhoods, communities, provinces, and regions across Canada differ in important ways. Therefore, gathering community-specific information about children and the places where they are raised can help the policy

[1] The EDI community monitoring report uses only EDI data. Whereas, the EDI data in this report are based on only those children and parents who completed the NLSCY community study as well as the EDI. In other words, to be included in the EDI sample for this report, children and their parents also completed the NLSCY community study. Subsequently, the numbers in the EDI report and the research report will not be the same.

sector[2] deliver programs that are sensitive and responsive to local conditions. *Understanding the Early Years* can contribute to this process.

This research report provides baseline information about kindergarten children in Prince Albert. Figure 1-1 shows the geographic area where the children and families sampled in this study live.

The first aim of this report is to assess how children fare in learning and behavioural outcomes, and in physical health and well-being. It considers children's development outcomes shortly after they begin kindergarten. Where possible, the report provides provincial- and national-level information with which local conditions can be compared.

The report's second aim is to discern how important certain family and community factors are in affecting children's development, as well as to provide some indication of what actions might further improve children's outcomes in this community.

The report sets out ten indicators upon which this community can act over the next few years. If the policy sector can devise means to improve the processes associated with these empirically based indicators, it is likely that children's outcomes during the formative years will improve, as will their chances of leading healthy and fulfilling lives.

## B. How the study was conducted

The information contained in this document was collected and analyzed using a variety of methods.

Two major types of information about the children were collected. The first considers their "readiness to learn," which comprises five major developmental domains:

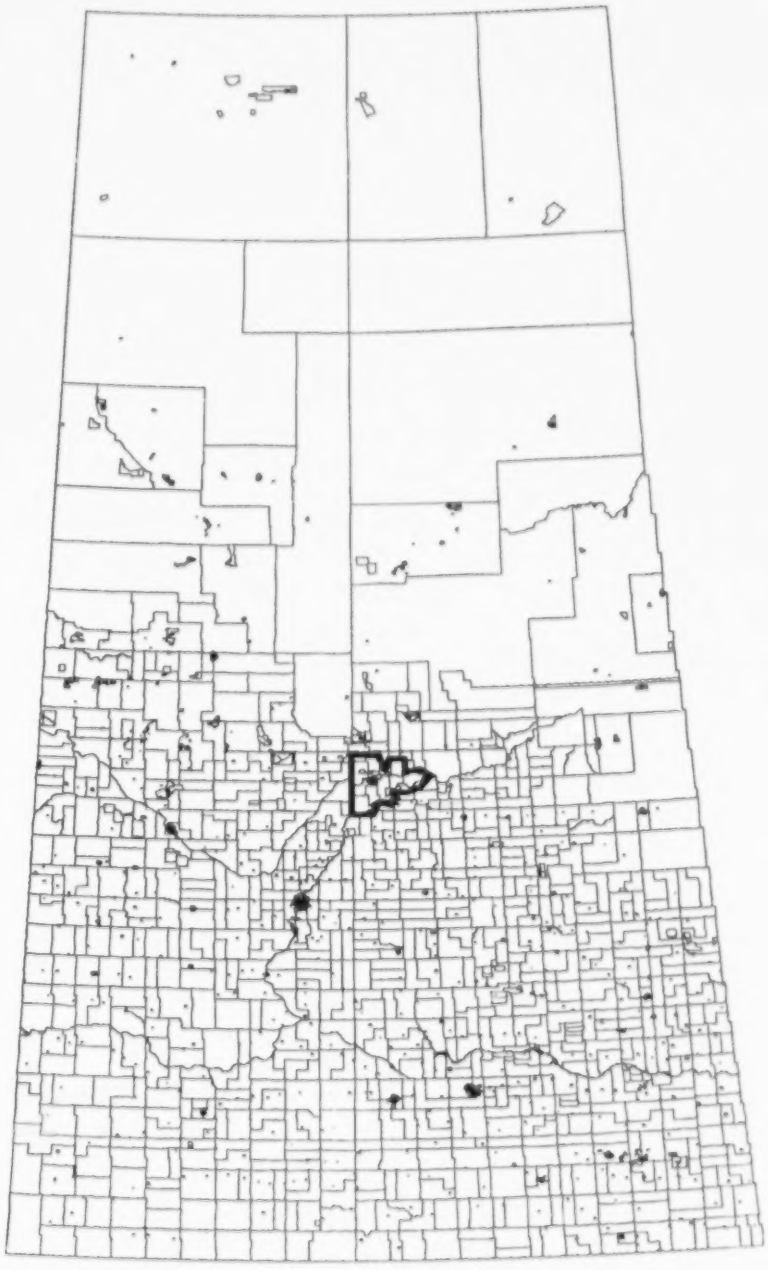
- Physical health and well-being
- Social competence
- Emotional maturity
- Language and cognitive development
- Communication skills and general knowledge

Information for this set of domains was collected by teachers, using a checklist called the Early Development Instrument (EDI) developed by Dr. Dan Offord and Dr. Magdalena Janus at the Canadian Center for Studies of Children at Risk, McMaster University. Teachers of all kindergarten children attending English language and French Immersion public schools in the community were asked to complete the checklist about the behaviours and development of each child in their class. This information was used to determine how ready the community's children, as a whole, were for school.

The second type of developmental information was collected through a survey of parents, guardians, and the children themselves. The instruments used in the National Longitudinal Survey of Children and Youth (NLSCY) Community Study were administered to children and their parents. This was done to acquire more detailed information about the experiences of children and families in Prince Albert, as well as measures of children's outcomes regarding their cognitive skills, pro-social and behaviour outcomes. In addition, information regarding childcare arrangements (e.g., whether children were cared for by parents, relatives, or non-relatives, either at home or outside the home) was collected.

[2] "Policy sector" is broadly conceived to include families, the private and voluntary sectors, and governments at local, provincial and federal levels.

## Figure 1.1 – Prince Albert



A random sample of 433 children from Prince Albert were selected to participate in this survey. Statistics Canada interviewers collected detailed information from and about these children using instruments from the NLSCY Community Study. The major instruments measuring children's outcomes include:

- Vocabulary skills (Peabody Picture Vocabulary Test, Revised) – Test of receptive vocabulary administered to each child.
- Developmental Level (Who Am I?) – Test of early literacy administered to each child.
- Number knowledge (Number Knowledge Assessment) – administered to each child.
- Behaviour Outcomes – determined by in-depth telephone interviews with the person most knowledgeable, usually the mother.

Children completed assessments that asked them to draw, print symbols, (e.g., letters and words), show their understanding of quantity and number sequence, and match pictures to words that they heard. Their families provided information about their social and economic backgrounds; their children's activities and involvement in the community; their health; and their social, emotional, and behavioural development.

The interviewers also collected information about several family and community factors that can help explain the patterns of child development in the community.

Because the NLSCY questionnaire is also used across the country as part of a national survey, the outcomes for children in this community can be compared to national data.

## C. Why the study is of interest

*Understanding the Early Years* (UEY) combines information about children with information about the families and communities in which they live. This in turn, provides an understanding of the relationship between children's outcomes and the environments in which they are raised. This is important for Canada's parents and communities who want to help their children develop well. Second, it helps the individuals, institutions, and communities who work with children to understand these processes at the levels where action is often most effective, the neighborhood and community.

This report highlights some of the key findings from the information that was collected from teachers, parents, and their children. It examines the overall development of children in kindergarten (through the Early Development Instrument) and provides a more detailed look at the outcomes of these children (through the NLSCY Community Study). It suggests some of the unique strengths from which Prince Albert can work, and some challenges to overcome in continuing to build a collective commitment to ensure the health, well-being, and positive development of its children.

## D. Socio-economic status in study area

Socio-economic status (SES) is an important variable in social research because it affects a person's "chances for education, income, occupation, marriage, health, friends, and even life expectancy." [3] This report describes children's outcomes and how they are affected by family socio-economic status, family processes, and community resources. Thus, it is helpful to have an understanding of the socio-economic backgrounds of the families in

[3] Miller, Delbert C. 1991. *Handbook of Research Design and Social Measurement*. Sage Publications, Inc. Newbury Park, CA. p. 327.

this community, as well as how these are distributed geographically across the study area. Socio-economic status is usually quantified as a composite measure comprising income, level of education, and occupational status. Accordingly, the measure of SES used here combines the income, level of education, and occupational status of the children's parents. Other family factors, such as family structure (e.g., single- or two-parent family), or whether the mother was a teenager when the child was born, are not dimensions of SES (although they are usually correlated with SES). Additional aspects of family and community structure will be presented in Section III.

Figure 1-2 show the distribution of socio-economic status for the urban area in Prince Albert. The urban map shows a fairly consistent pattern of lower socio-economic status (SES) in Prince Albert. There were a few EA's in the north-west, north-central, and north-east sections with scores in the very low range (shown in brown and red). There were a large number of EA's distributed evenly across the urban map with scores in the low (shown in orange) to mid range (yellow). There are a number of contiguous EA's in the south-east area of the urban map that have high to very high scores (shown in light green and dark green). Overall, the urban map shows diversity with a number of EA's in the lower end of the continuum, many in the middle and several in the high SES range.

There was insufficient data, to produce a SES map for the rural study area in Prince Albert.

**Inset 1 - Socio-economic Status**

The measure of socio-economic status for the map in Figure 1-2 was derived from the 1996 Canadian Census, based on data describing enumeration areas(EAs) which represents a geographic unit of about 400 families. The measure of SES is a composite score derived from census measures of family income, level of education, and the occupational status of adults living within each enumeration area. The composite scores were standardized, such that the average score for all EAs in Canada was zero, and the standard deviation was one. With this standardization, only about one in six EAs scored below -1 (low SES shown in brown), and about one in six scored above +1 (high SES shown in dark green) in Prince Albert.

## Figure 1.2 (Urban): Socio-economic Status of Prince Albert

## Figure 1.2 (Urban): Socio-economic Status of Prince Albert

# II. Profile of Prince Albert – Context for the Study

This chapter describes the demographic highlights of the Prince Albert community – the Aboriginal and non-Aboriginal population, employment, justice, education, income, language, family structure, residential mobility, housing, teen pregnancy, and infant mortality - to provide context for the study. Moreover, community maps from the accompanying Prince Albert UEY mapping report entitled, *Understanding the Early Years, Results of the Community Mapping Study for Children in Prince Albert, Saskatchewan,* have been incorporated. The selected maps depict the social index and the distribution of unemployment, income, lone parent families, and family mobility in Prince Albert. See Appendix A for additional demographic information concerning the physical environment of Prince Albert, employment, education, justice, housing, language, and teen pregnancy. See Appendix B for a description of the social index used in the community maps.

## A. Profile of Prince Albert

### Population

Prince Albert, the province's third largest city, "plays an important role in the economy of north central Saskatchewan, providing wholesale and retail trade, private and public services, as well as substantial employment to residents of the surrounding.[4] The city's business sector is well established and offers "considerably more types of business than other Secondary Wholesale Retail Centres in the province" (op cit, Appendix 1). The city of Prince Albert is a small urban centre covering an area of 64.98 square kilometres and has a population of approximately 40,000 that increases to over 50,000 when the study area of approximately 50 square miles is considered.

Although there is rich agricultural land, and a thriving forestry industry (a large pulp and paper mill as well as several saw mills), the process of urbanization within this region mirrors the provincial trend and is projected to increase to sixty-five percent of the region's population by 2005 (op cit, p. 12). On the other hand, the population of areas outside urban centres is expected to decline by five percent by 2005 accounting for only thirty-five percent of the region's population, down from fifty-three percent in 1971 and thirty-eight percent in 1997 (p. 12). A notable effect within the province and the region is the reduction in the number of farmers (op cit, p. 17).

### Aboriginal Population

Stabler and Olfert (1998) report that while the non-Aboriginal under 15 age group dropped from thirty-one percent of the population in 1971 to twenty-one percent of the population in 1997, a very high proportion of the Aboriginal population is in the under fifteen group and "even in the 2005 projections is more than twice the proportion found in the provincial population as a whole" (op cit., p. 10). While the non-aboriginal population grew by only two percent between 1971 and 1997, the Aboriginal population increased by 252%.[5] The Aboriginal population in Prince Albert is presently between 30% and 40% and

[4] Stabler, J.C. and Olfert, M.R. (1998). "Prince Albert Planning Area: Selected Economic and Demographic Characteristics", unpublished work commissioned by the Saskatchewan Department of Education for the Saskatchewan Training Strategy, Post-Secondary Education and Skills Training, p.27. Hereafter referred to as "op cit".

[5] It should be noted that the Stabler and Olfert 'planning areas' are somewhat larger than the study area.

is expected to approximate half the population by 2010.

The Aboriginal population in the prime age work force group (25-44) is projected to be 4.4 times greater in 2005 than it was in 1971 which indicates that there is a growing need for new jobs in this region (op cit., Appendix 1).

A substantial movement of Aboriginal people from the far north to Prince Albert, both permanently and seasonal, also has consequences.

## Employment

Prince Albert has a "relatively low labour market participation rate, 58% for females and 72% for males and a traditionally high unemployment rate of approximately 11% for males (op cit., Appendix 1). In 1991, the size of the labour force increased in Prince Albert as did the proportion of the region's full-time employed which led to some skill shortages.

The distribution of the region's labour force demonstrates that education, health, social services, and other government services such as justice account for greater proportions of total employment than the rest of the province.

The region has a high social assistance recipient population, 2,125 in September 1998, which accounts for six percent of the region's potential work force (op cit., Appendix 1).

## Justice

Justice is one of the largest employers in Prince Albert, Saskatchewan. Prince Albert contains 9 penal institutions. The 3 types of federal institutions are located on the Saskatchewan Penitentiary grounds although they are in different buildings with two different types of management structure. There are two provincial institutions, one for men and one for women, and four youth facilities for adolescent males.

Presently, there are about 1,066 people incarcerated in Prince Albert and approximately a thousand employed in the various penal institutions. These institutions affect the community on a daily basis. The children and companions of these inmates frequently live in our community, as do the thousand or so employees (see Appendix A for more details).

## Education

In Prince Albert, 15% of the population have less than a Grade 9 Education, 26% have less than a Grade 12 Education and 56% have Grade 12 Education or less; 26% of the population has a post-secondary certificate or diploma, 10% have some university training, but only 7.5% hold a Baccalaureate degree or more.

Twenty-six percent of the population did not complete high school. One in four individuals, opted out of the public education before matriculation. Even in the highest income areas no more than 60% of the population has a post secondary education. This suggests that some of the residents in the community are able to access good paying jobs without high levels of education.

## Income

Although the average income of full-time employees in the region is the third highest of all the regions in Saskatchewan (op cit., Appendix 1), twenty-one of the thirty-eight enumeration areas in the city report household incomes below the national average (See Map 9c).[6]

[6] The data does not indicate how many people must sustain themselves on this income or if there are single or dual incomes; it merely labels it 'household income'.

"Considering all employment income, the average for females in the Prince Albert region is about 63% of that for men" (op cit., p. 24). About one in three families is headed by a lone female parent in the city and about one in 10 in the rural area.[7]

## Language

Although most of the Prince Albert area's population speaks one of the two major languages of the country, a large portion of the population does not have mastery of the language they speak, or speaks a non-standard dialect of that language.

## Family Structure

The Census in 1996 indicated there were 6,285 families with children in the City of Prince Albert and 2,870 families with children living in towns, villages and rural areas surrounding Prince Albert (Kuzbik, Nosbush & Sutherland, 2001, p. 14).

The family structure varied considerably across the urban and rural areas (Kuzbik, Nosbush & Sutherland, 2001, pp. 14-15). An average of 68.9% of couples were living in a married relationship but the results were significantly different between rural and urban areas (57.3% of the couples in Prince Albert were married versus 80.4% in the rural area).

Single parents account for about one in five family units in Prince Albert and area, however, in the urban area 32.7%, or about one in three families, is headed by a lone parent (4% by males and 29% by females) whereas only 14%, or about one in seven households, in the rural area is headed by a lone parent (3.3% male versus 11.1% female).

About one in ten families live in common law relationships in the city whereas only one in twenty do so in the rural area. Almost sixty percent of families lived in a marriage relationship in the urban area (about one in two) whereas four out of five families live in a marriage relationship in the rural area.

## Residential Mobility

An examination of mobility rates in Prince Albert and area suggests high rates of mobility within the city as compared to the rural area (See Map 5a). One of the largest elementary schools in the city reported a 95% turn over rate in its school population during this academic year (personal communication).

## Housing

Housing is becoming progressively more expensive and the threshold for breaking into the housing market has increased because starter homes have markedly escalated in value.

The average price of a home in Prince Albert has increased by 14% over the past three years. In 1998, 36% of all houses sold for less than fifty thousand dollars compared to 24% in 2000. Similarly, in 1998, only 22% of homes sold for over one hundred thousand dollars compared to 31% of homes in 2000 (Prince Albert Housing Committee (February 2001), p. 28).

There are currently 2579 people living in social housing in Prince Albert, which represents a five percent increase from 1998. Currently, 974 social housing units exist and 44% of them are for seniors and 56% are for families (Saskatchewan Housing as cited by Prince Albert Housing Committee, p. 27). The majority of social housing is located in neighbourhoods with relatively high numbers of people who spend more than 30% of their

[7] Kuzbik, Nosbush & Sutherland (2001). *Understanding the Early Years, Results of the Community Mapping Study for Children in Prince Albert, Saskatchewan*, Applied Research Branch, Strategic Policy, HRDC, pp. 14-15

income on rent and these are precisely the neighbourhoods where family income is most often below the national average (Kuzbik, Nosbush & Sutherland, 2001, p. 52).

## Health

### Teen Pregnancy

In 1989, Saskatchewan had the second highest rate of adolescent pregnancy among Canadian provinces and territories (Saskatchewan Institute on the Prevention of Handicaps, 1998. p. 51).

There were 911 live births to mothers under the age of 20 during the five-year period from 1989-1994 accounting for 16.1% of the total births in the health district, which was 46.4% higher than the provincial average of 11% (p. 236). When compared to other areas of the province, Prince Albert has an extremely high rate of teen pregnancy. About one in six parents in Prince Albert are very young, choosing to keep their infants, and frequently raising them by themselves.[8] Most (91.3%) of these mothers were single which is 2% higher than the rate in the rest of the province (p. 236). That approximates 7.3 classrooms of children per year who are born to young adolescents; some of these adolescents will have their children start school before their age cohort matriculates.

### Infant Mortality

While Saskatchewan had the highest provincial rate of live births to women 15 to 19 years of age in the country at 46.3 per 1,000 (Wadhera & Millar, 1997, p. 13), the infant mortality rate is almost double the Canadian average and a third higher than the provincial average (Saskatchewan Health, 2000).

## Prince Albert Maps

**Map 1**, The child (0-5) population density and green space. Young children are distributed across Prince Albert but the largest concentration of children tends to arise in those neighbourhoods with the greatest socio-economic challenge (Kuzbik, Nosbush & Sutherland, p. 14). Ample numbers of parks and green spaces are located throughout the city. The larger green spaces in the southeast area of the city represent a golf course and a large soccer, football and track facility (Prince Albert Health Board [November 2000]).

**Map 2**, The family mobility profile in Prince Albert and area. There were high rates of mobility within the city as compared to the rural area.

**Map 3**, The unemployment rate for persons 15 years and older for the urban areas in Prince Albert. There are several areas within the city where almost every second person in the enumeration area is unemployed. There are a number of high need areas where this data is suppressed so the proportion is likely even greater than the map suggests.

**Map 4**, The national average family income for the urban areas in Prince Albert. Twenty-one of the thirty-eight enumeration areas in the city report incomes below the national average.

**Map 5**, The number of families headed by a lone parent for the urban area in Prince Albert. There is a high rate of mobility in the areas where large numbers of lone parents reside suggesting that the neighbourhoods where they live are fluctuating considerably and are therefore unlikely to provide the stable support systems necessary for optimal growth of young

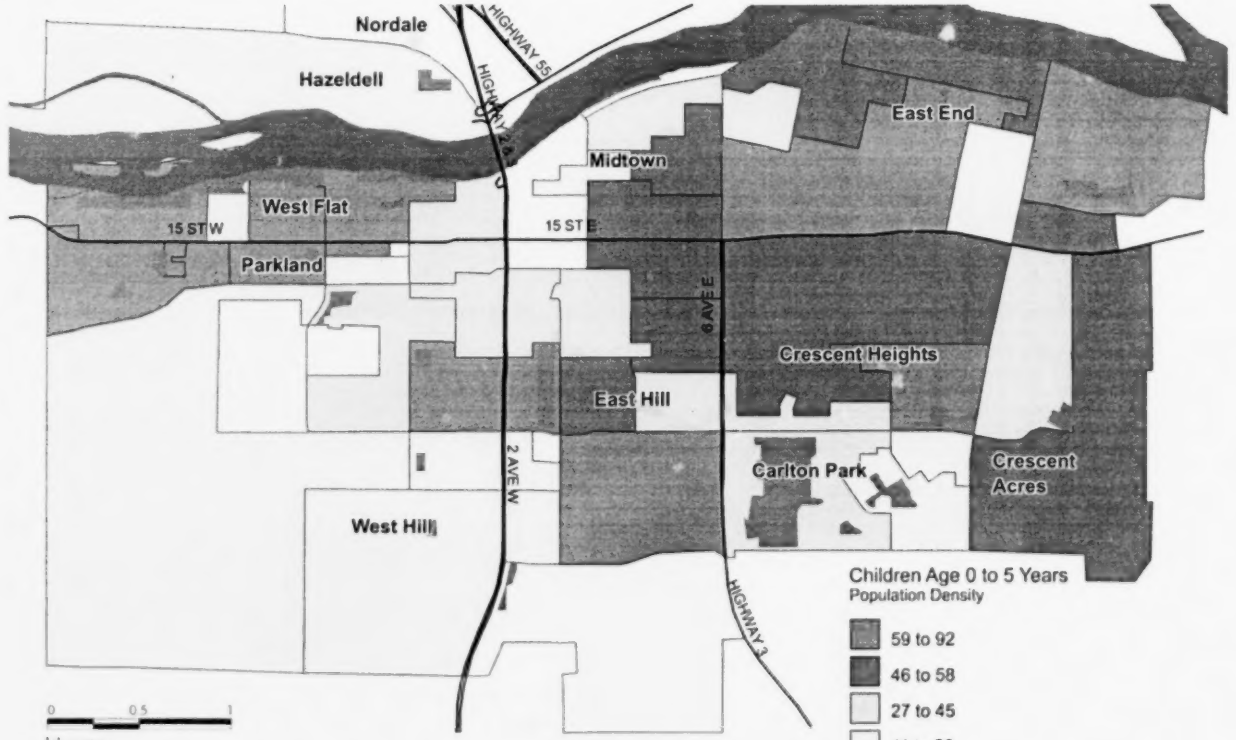
[8] Saskatchewan Institute on Prevention of Handicaps (1998), p. 236.

children. These also tend to be the areas where there are large numbers of young children, a high proportion of rental properties and social housing, as well as low levels of income and education.

**Map 6**, The social index for the urban area in Prince Albert: Almost half of the city could be labelled high or somewhat high risk. These neighbourhoods score high on all the indices except for the two that are not represented in Prince Albert.

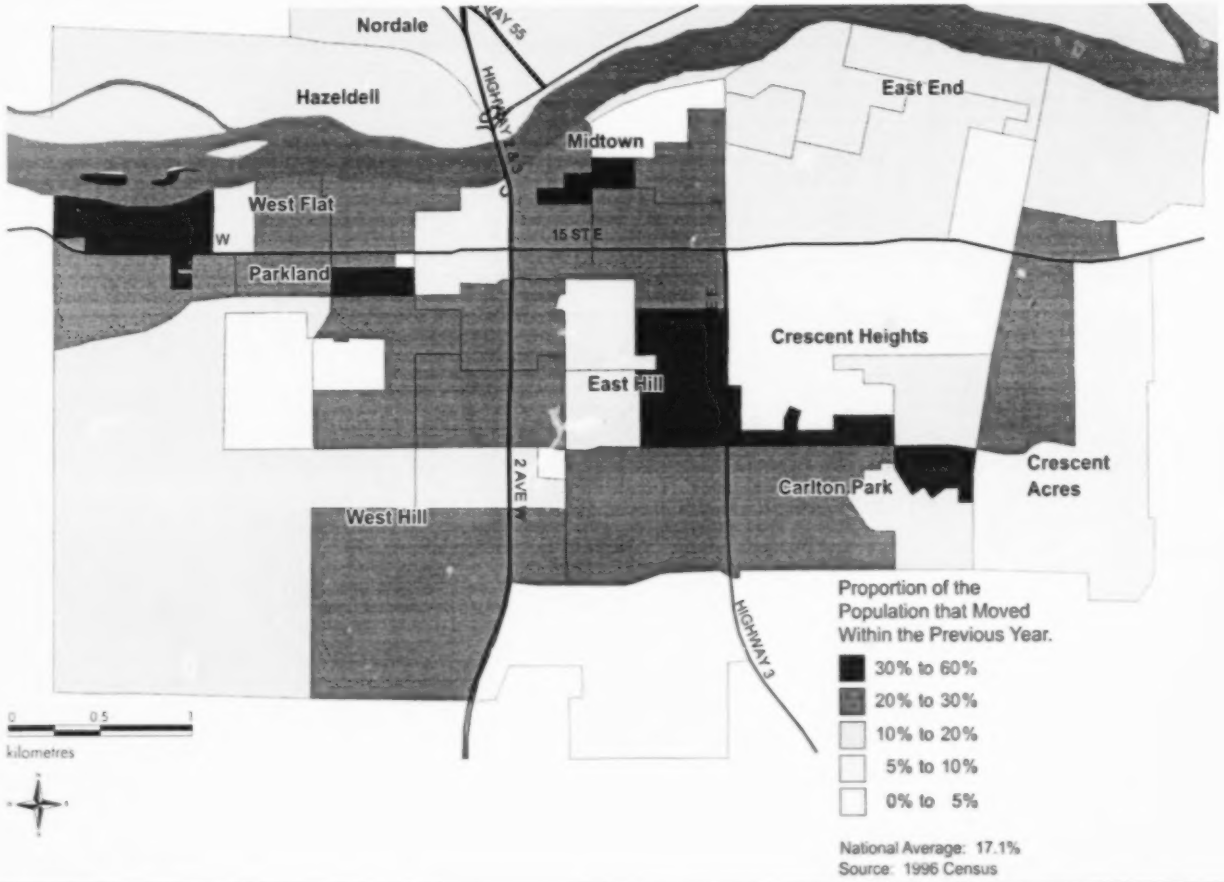
Note: Prince Albert maps have been drawn from the companion study *Understanding the Early Years: Results of the Community Mapping Study for Children of Prince Albert, Saskatchewan.*

## Map 1 (Urban): Where did children age 0 to 5 years live?

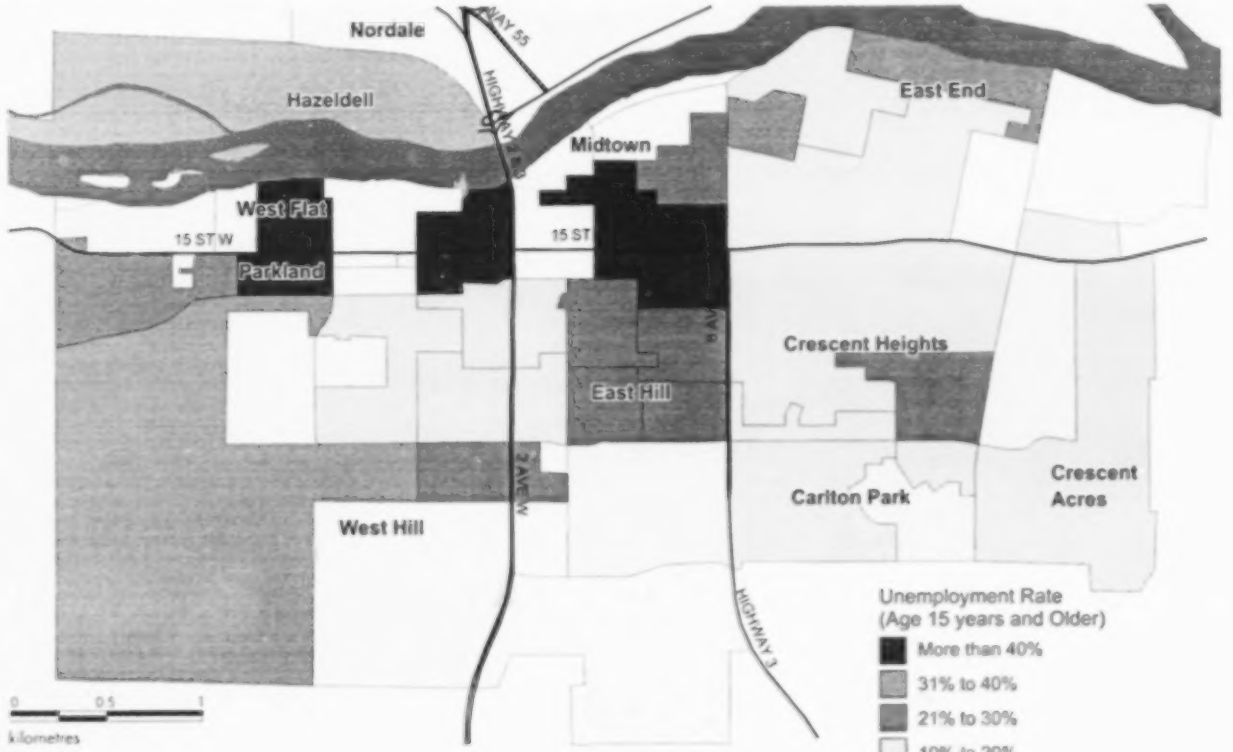


## Map 1 (Urban): Where did children age 0 to 5 years live?

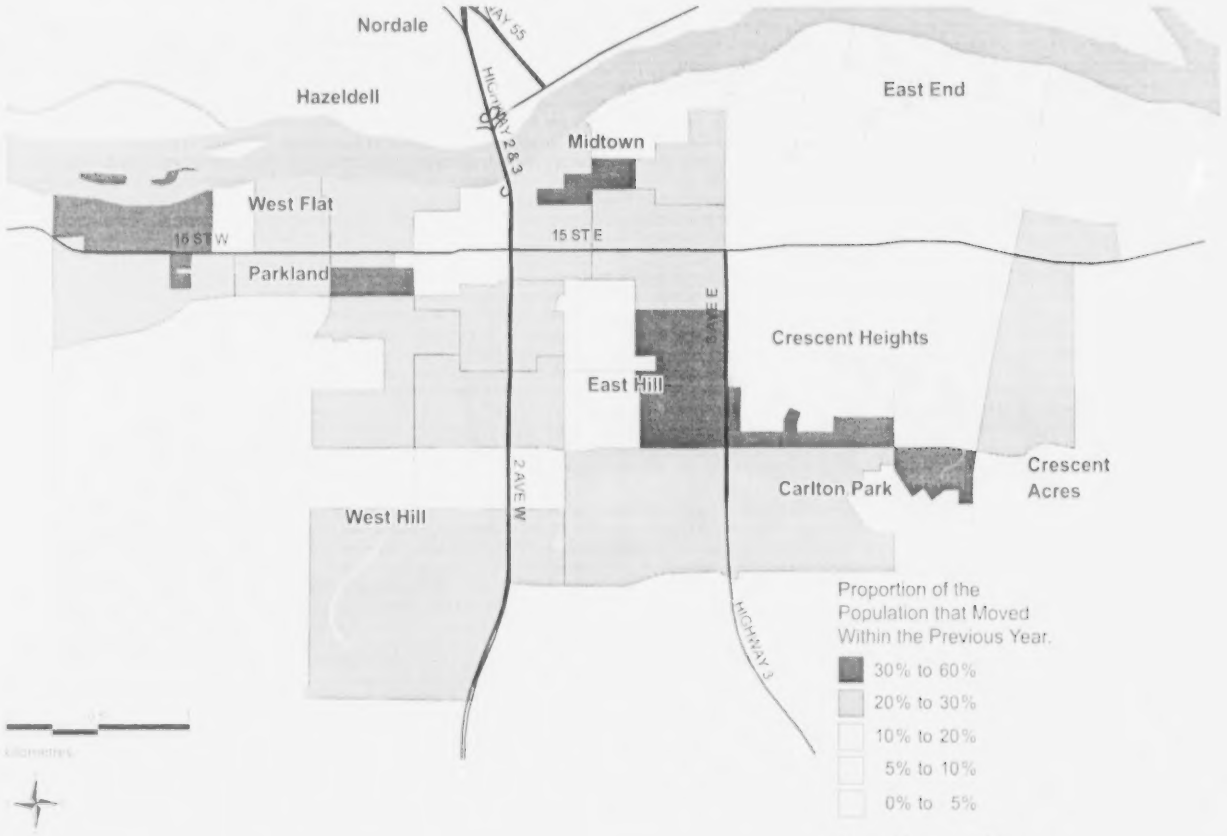
## Map 2 (Urban): Which areas had the highest mobility?



## Map 3 (Urban): What were the unemployment rates of the neighbourhoods?

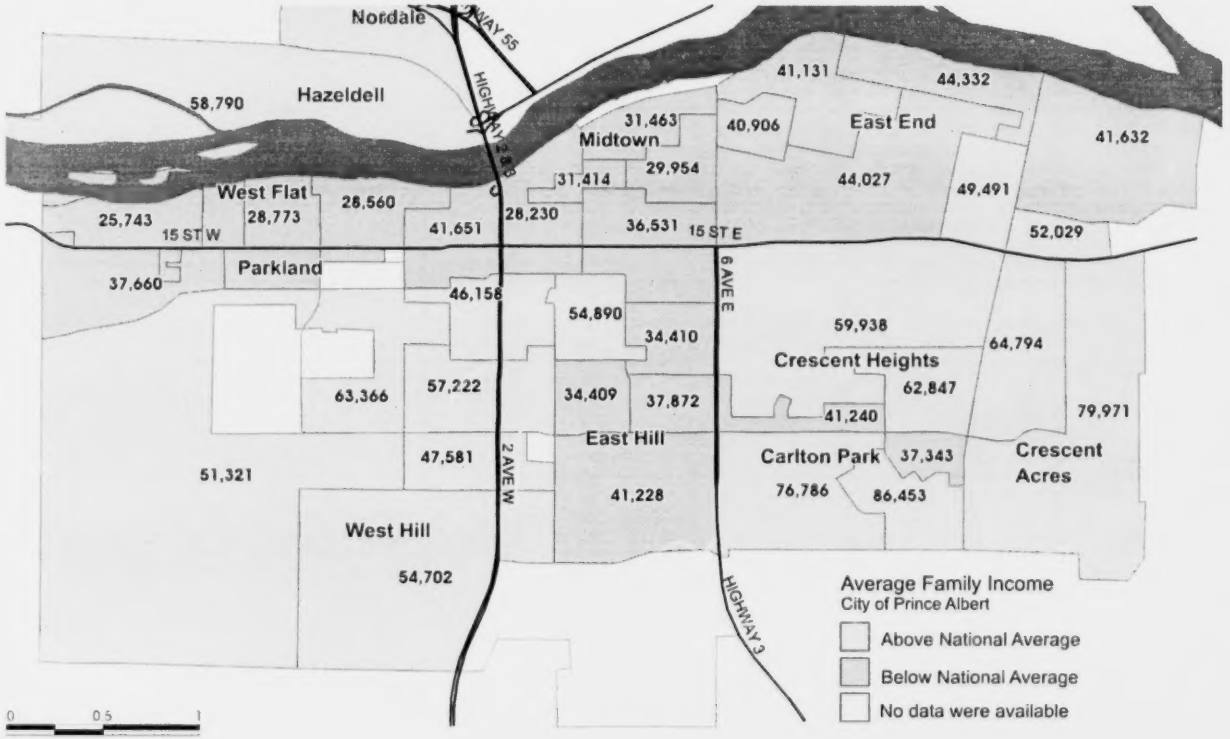


## Map 2 (Urban): Which areas had the highest mobility?

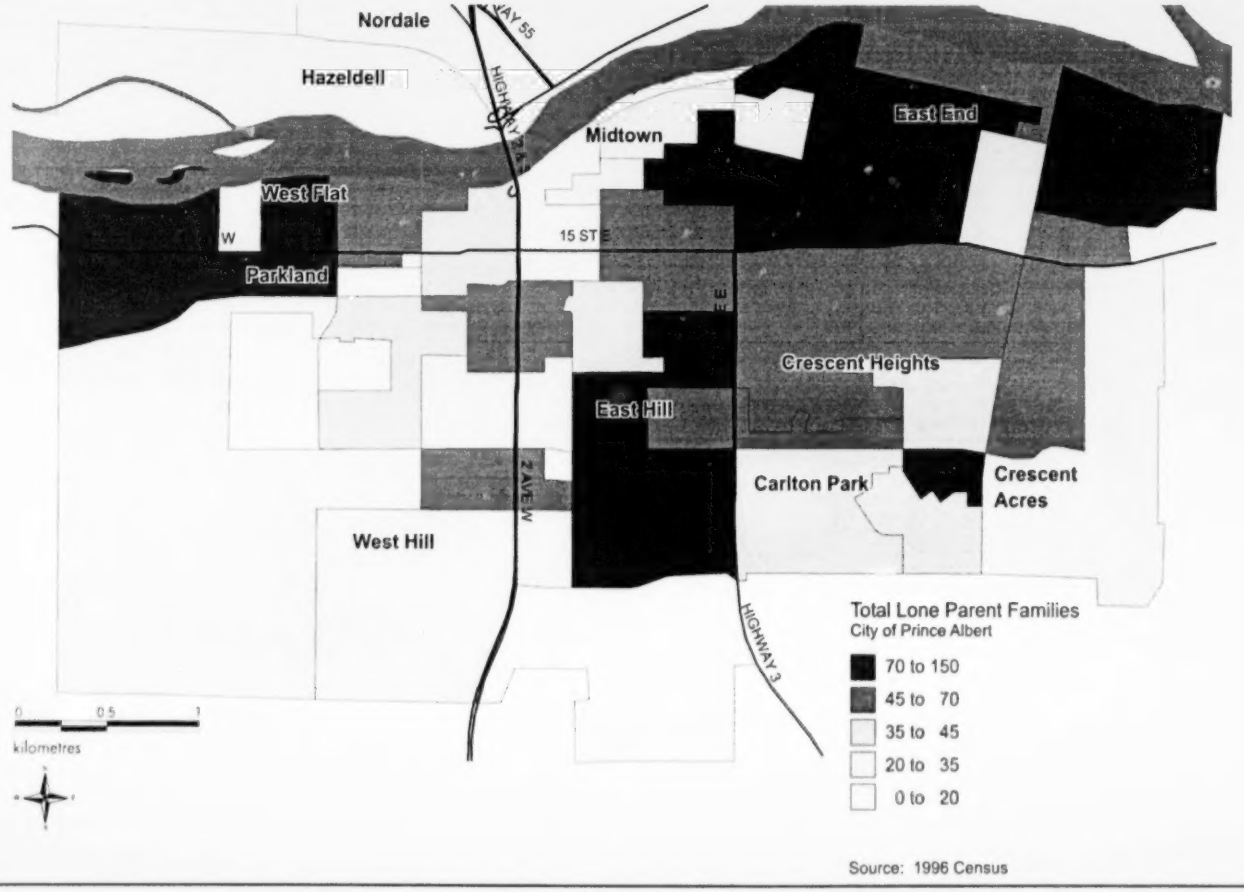


## Map 3 (Urban): What were the unemployment rates of the neighbourhoods?

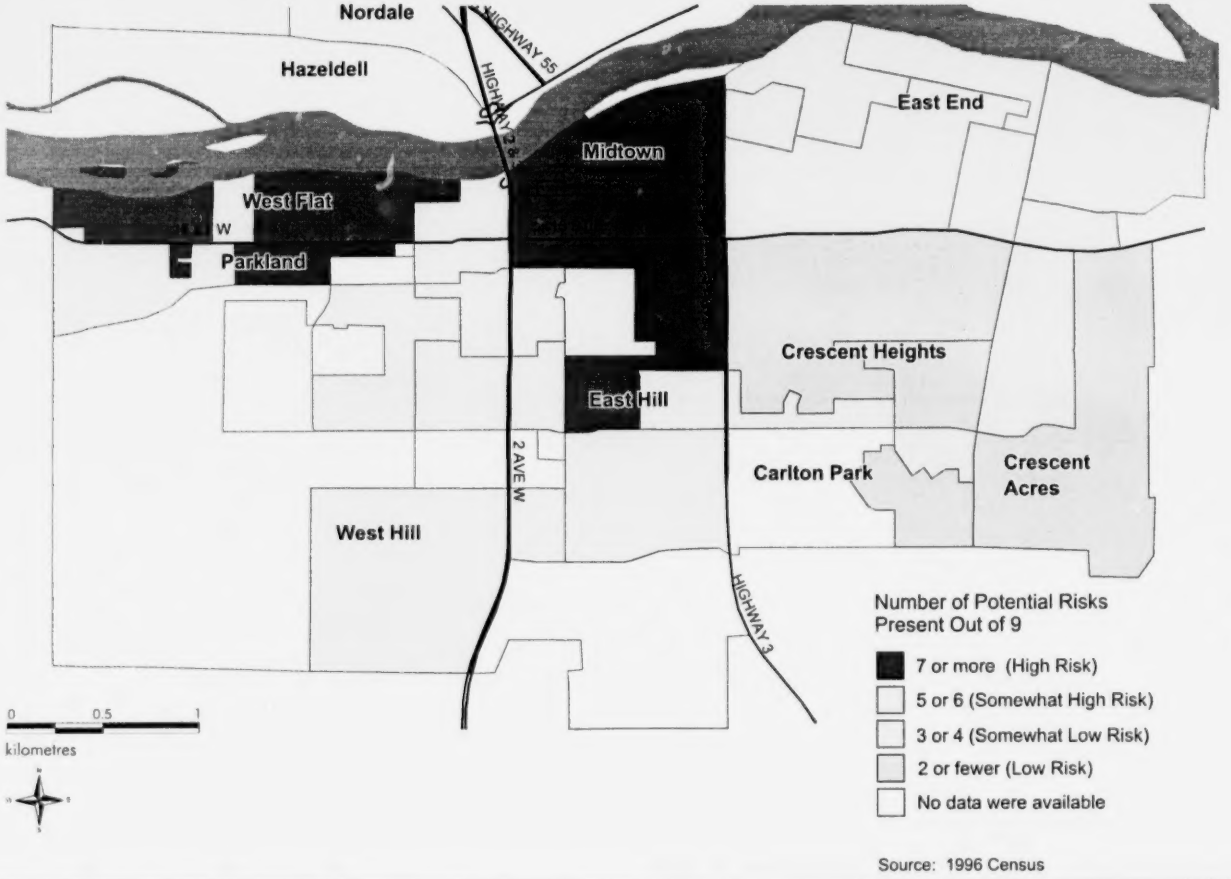
## Map 4 (Urban): What areas were above and below the national average family income?



## Map 5 (Urban): Which areas had the highest number of families headed by a lone parent?



## Map 6 (Urban): What did the Social Index tell us about the Prince Albert community?



# III. The Outcomes for Children of Prince Albert

## A. How the outcomes were measured

This section provides more information about the specific measures of children's outcomes. A child's cognitive skills, behaviour, and physical health and well-being outcomes were measured in two ways, using the NLSCY Community Study and the EDI.

### Five Domains for EDI *(teacher report)*:

*Physical health and well-being:* children's motor skills, energy levels, fatigue and motor co-ordination.

*Social competence:* self-confidence, tolerance, and children's ability to get along with other children, to accept responsibility for their own actions, and to work independently.

*Emotional health and maturity:* children's general emotional health and maturity. It also identifies minor problems with aggression, restlessness, distractibility, or in-attentiveness, as well as excessive and regular sadness.

*Language and cognitive development:* mastery of the basics of reading and writing, interest in books, and numerical skills (e.g., recognizing numbers and counting).

*Communication skills and general knowledge:* children's general knowledge, their ability to articulate clearly, and their ability to understand and communicate in English.

### Cognitive Skills (from the NLSCY - *direct assessments of the child*):

*Vocabulary skills (Peabody Picture Vocabulary Test, Revised – PPVT-R)* assesses a child's receptive or hearing vocabulary. The children hear a word said aloud and are asked to point to one of four pictures that they believe corresponds to the word.

**Inset 2 - The Early Development Instrument contained more than 70 questions, and asked teachers the following types of questions about each child in the class:**

- **Would you say that this child follows instructions, accepts responsibility, and works independently?**
- **How often is the child too tired to do school work?**
- **Is the child well coordinated?**
- **Would you say that this child is upset when left by a caregiver, has temper tantrums, appears worried, or cries a lot?**

**Teachers were asked to comment on the child's use of language to communicate, his or her interest in books, and his or her abilities related to reading and writing. They were also asked about children's communication skills and general knowledge.**

*Developmental Level (Who Am I?)* is based on copying and writing tasks, which are designed to test their ability to conceptualize and to reconstruct a geometrical shape, and to use symbolic representations, as illustrated by their understanding and use of conventional symbols such as numbers, letters, and words. Children are asked to copy five shapes (such as a circle and a diamond) and to write their names, numbers, letters, words, and a sentence. *Who Am I?* can be

used to assess the cognitive development of children; because the tasks are not dependent on language, English or French, regardless of their facility with it.

*Number knowledge (Number Knowledge Assessment)* is designed to assess the child's understanding of numbers. Children who do not have this understanding, or who are working in a language different from their mother tongue, often have difficulty mastering basic arithmetic and demonstrating number sense. The *Number Knowledge Assessment* evaluates children's understanding of quantity (more vs. less), their ability to count objects, their understanding of number sequence, and their ability to do simple arithmetic.

### Behaviour Outcomes (from NLSCY Community Study – *parent report*):

Identifying a child's behaviour is based on assessments by the person most knowledgeable about the child, usually the mother.[9] The measurements comprise several questions, each with the same format. The mother is asked how often her child cannot sit still, is restless, or is hyperactive. She answers with one of three possible responses – "never or not true"; "sometimes or somewhat true"; and "often or very true." The assessment included the following elements:

*Positive social behaviour:* children who exhibit higher levels of positive social behaviour are more likely to try to help and comfort others. They may offer to help pick up objects that another child has dropped or offer to help a child who is having trouble with a difficult task. They also might invite their peers to join in a game.

The positive social behavior outcome was not correlated to the four problem behaviour outcomes – indirect aggression, hyperactivity, emotional disorder/anxiety, and physical aggression and conduct disorder. This indicates the likelihood that parents reported positive behaviour as well as one or more of the problem behaviours when answering the NLSCY Community Survey.

*Indirect aggression:* this element identifies children who, when mad at someone, try to get others to dislike that person; who become friends with another for revenge; who say bad things behind the other's back; who say to others, "Let's not be with him/her"; or who tell secrets to a third person.

*Hyperactivity:* hyperactive children cannot sit still; are restless and are easily distracted; have trouble sticking to any activity; fidget; cannot concentrate, cannot pay attention for long; are impulsive; have difficulty waiting their turn in games or groups; cannot settle to do anything for more than a few moments.

*Emotional disorder/anxiety:* this element identifies children who seem to be unhappy, sad, or depressed; are too fearful or anxious; are worried; cry a lot; tend to be rather solitary; appear miserable, unhappy, tearful, or distressed; are not as happy as other children; are nervous, high strung, or tense; or have trouble enjoying themselves.

*Physical aggression & conduct disorder:* these children get into many fights. When another child accidentally hurts them (by bumping into them, for example), they assume that the other child meant to do it, and then react with anger and fighting. Also included are children who kick, bite, hit other children; physically attack people; and who threaten people, are cruel, or bully others.

[9] Statistics Canada trained personnel conducted the parent interviews by telephone only in English or French for the NLSCY. Parents without telephones or speaking other languages were not interviewed.

## B. What we learned from teachers: Results of the Early Development Instrument

The children of Prince Albert scored well overall on the five EDI domains, for example, 8.5 for physical health and well-being, 8.1 for social knowledge and competence, and 7.8 for communication skills and general knowledge (see Table 2-1).[10] Prince Albert children scored 0.6 points above the EDI-16 for social knowledge and competence and 0.6 above for communication skills and general knowledge. They scored slightly below the EDI-16 on emotional health and maturity (-0.2), and physical health and well-being (-0.1). Prince Albert children scored 0.6 below the EDI-16 on language and cognitive development.

Figure 2-1 shows that the median scores for the EDI domains in Prince Albert are either above or slightly below those in the EDI-16 sample. The range of scores are indicated by the length of the boxes.[11] The inter-quartile range of children in Prince Albert is similar to that of the EDI-16 sample. Social Knowledge and Competence and Language and Cognitive Development, were the exception with more variable scores for both.

Inset 3 shows the median and percentiles for the distribution of EDI scores for each group. The median represents the point at which 50% of the cases fall below and 50% of the cases fall above the median. Percentiles refer to the percentage of cases with values falling above and below them.

Table 2.1 – **Mean Scores on the Early Development Instrument for the Prince Albert Community and the Comparison Sample (EDI-16)**

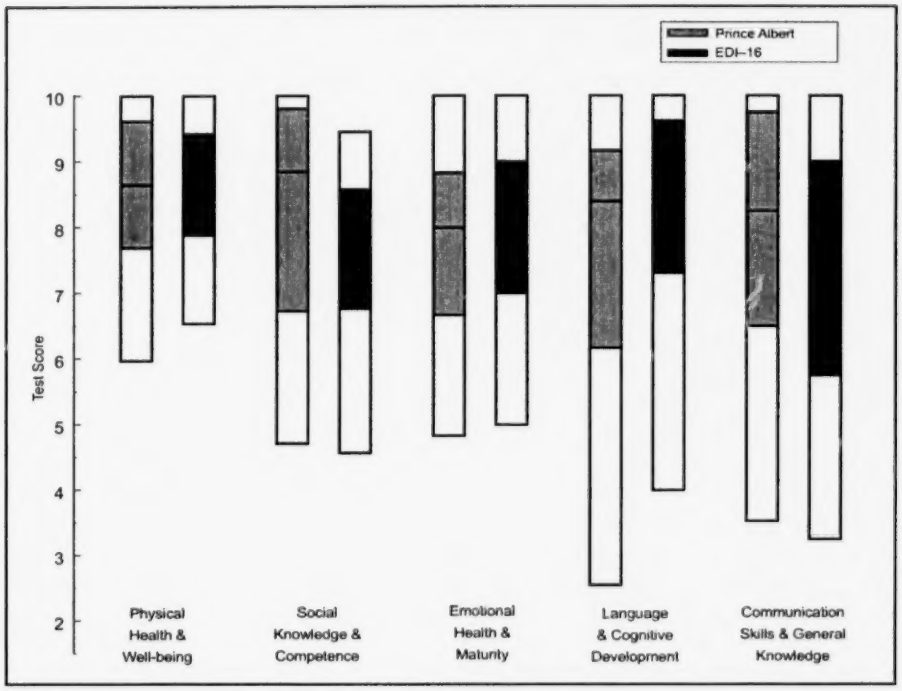
| | Prince Albert UEY Community (N=339) | | EDI–16 (N=28,250) | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Physical Health and Well-being | 8.5 | 1.3 | 8.6 | 1.1 |
| Social Knowledge and Competence | **8.1** | 1.9 | 7.5 | 1.5 |
| Emotional Health and Maturity | **7.7** | 1.6 | 7.9 | 1.5 |
| Language and Cognitive Development | **7.5** | 2.3 | 8.1 | 1.9 |
| Communication Skills and General Knowledge | **7.8** | 2.0 | 7.2 | 2.1 |

*Note: Figures in blue text differ significantly ($p < .10$) from the EDI-16.*

[10] The EDI sample size, N=339, included valid data only. To be included in the EDI sample size for Prince Albert, children needed scores on at least 3 out of the 5 EDI domains. This explains why the EDI sample size (N=339) is different from the NLSCY sample size (N=433) for Prince Albert.

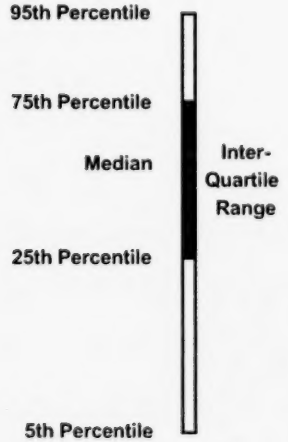
[11] The longer the boxes, the greater range of variability in the EDI domain scores. For example, the physical health and well-being domain has a short box which indicates that scores are similar to one another. In contrast, the language and cognitive development domain for this community has a longer box, which indicates that scores varied more from one another.

Figure 2.1 – Box plots comparing the distribution of EDI scores for Prince Albert with the EDI-16




**Inset 3 - Percentile Plots**

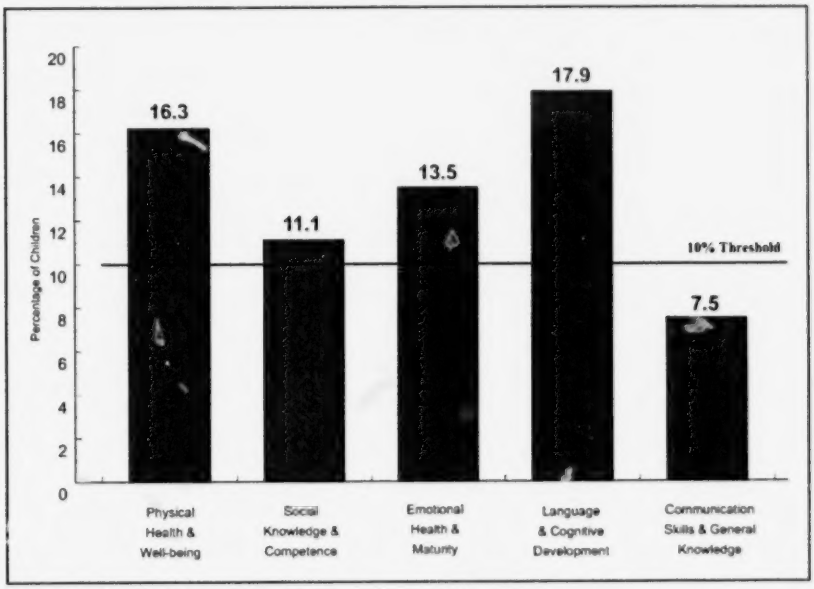
The percentile plots display the distribution of the EDI scores for each group as follows:




Data from the EDI-16 were also used to establish a "low-score" threshold for each EDI domain. The "low-score" threshold scores were set to the tenth percentile, which means that 10% of all children in the sample scored below the threshold for each domain. Thus, if a community had typical results, we would expect 10% of its children to have scores below the same threshold on each domain. Typically, communities have the highest scores in the Physical Health and Well-being domain. This finding may not be surprising, given universal access to health care for Canadians.

In Prince Albert, however, the percentage of children with low scores ranged from 7.5% to 17.9% across the five domains. The areas of greatest concern were Language and Cognitive Development (17.9%) and Physical Health and Well-being (16.3%).

Figure 2.2 – Percentage of children with low scores on the Early Development Instrument (Prince Albert).




*Note: Significant differences ($p<.05$) are indicated with red text.*

The data collected as part of the *Understanding the Early Years* study included information about where each child resided. Therefore, an analysis was conducted that would give some indication of how children's scores on the EDI were distributed geographically. To achieve this, the average score within each enumeration area was determined, for each domain of the EDI. The average scores for each enumeration area was then "smoothed".

Figures 2.3 through 2.7 display the geographic distribution of the EDI scores for each of the domains. The distributions vary by domain, the higher scores are indicated by the blue, green, and dark green (very high). Higher middle-range scores are indicated by beige; the lower mid-range scores are indicated by yellow and pink; and the low to very low scores are indicated by the orange, red, and brown (very low).

It is important to recognize that while some areas have generally high scores, there will always be some children needing extra support in any given neighbourhood.

**Inset 4 - Smoothing Data**

This is a statistical technique that involves estimating the mean score for a particular EA together with the scores for all of the EAs that immediately surround it (the technical term is "geographically contiguous"). Smoothing the spatial data in this way provides a more accurate display of what we would expect if all kindergarten children in the community had participated in the EDI. It also ensures that the confidentiality of individuals, or small groups of individuals, is not compromised.

## Physical Health and Well-being

### Urban

Figure 2.3 (a) shows a fairly even distribution of mid- to high scores in the central section (East Hill, Crescent Heights, Carlton Park, and Crescent Acres) of the urban area of Prince Albert for physical health and well-being (shown in blue and beige). The map indicates several EAs in the west-central section (West Hill) of the urban area with very high scores (shown in light green and dark green). It also shows several EAs with slightly lower scores in the south-central and north-east sections (Midtown and East End) (shown in yellow and pink). Overall, children are doing well concerning physical health and well-being in the urban area for Prince Albert.

### Rural

Figure 2.3 (b) shows a fairly even distribution of high scores for the rural area of Prince Albert concerning physical health and well-being. Most of the EAs throughout the rural area of Prince Albert range from high to very high scores (shown in blue, light green and dark green). There several south-central and south-east EAs in rural Prince Albert with low (orange) and very low scores (shown in brown) on physical health and well-being. Overall, the maps clearly indicate that the rural area scores consistently higher than the urban area in Prince Albert concerning the physical health and well-being domain.

Overall, the maps indicate that the rural area scores consistently higher than the urban area in Prince Albert concerning the physical health and well-being domain.

## Language and Cognitive Development

### Urban

Figure 2.4 (a) shows a fairly even distribution of lower mid-range scores for the urban area of Prince Albert concerning language and cognitive development (shown in pink and yellow). The north-west section of the urban area (West Flat, Parkland, Hazeldell, Midtown), and portions of the south west region of Prince Albert (West Hill) depict low to very low scores for this domain (shown in orange, red and brown). There are several EAs in the south east section of the urban area (Crescent Acres and Carlton Park and Crescent Heights) with higher mid-range scores (shown in beige), as well as several EAs with high scores in the west-central section of Prince Albert's urban area (shown in beige and blue).

### Rural

Figure 2.4 (b) shows a pattern of lower mid-range scores for the rural area of Prince Albert concerning language and cognitive development (shown in pink and yellow). The south-east portion shows several EAs with very high scores for language and cognitive development (shown in dark green). The south-central, east-central, and north-east sections of the rural area all have several EAs in the low to very low scores for this domain (shown in orange, red and brown).

Overall, the rural map indicates a similar pattern of lower mid-range results, compared to the urban map concerning the language and cognitive development domain. The exception being that there are a number of contiguous EAs in the central-east area of the rural map that have mid-range scores (beige) and several EAs in the south portion of the rural map with very high scores (dark green).

## Communications Skills and General Knowledge

### Urban

Figure 2.5 (a) shows an even distribution of lower mid-range (yellow) and mid-range (beige) scores throughout the urban area of Prince Albert for communication skills and general knowledge. This tells us that the high scores shown in Table 2.1 are not the result of concentrated high scores in a few EAs. It is noteworthy that the north-west, north-east and north central sections of the urban area (Midtown and West Flat) contains several EAs with lower mid-range (pink) to low scores (shown in red and orange) for communication skills and general knowledge. There are two EAs in the north-west section with high (light green) and very high (dark green) scores.

### Rural

Figure 2.5 (b) shows a higher range of scores throughout the rural area of Prince Albert for communication skills and general knowledge. While the east-central and south-east sections of the rural area score high (shown in light green and blue) to very high (dark green), there are several EAs throughout these areas with very low scores (shown in brown and red). The west-central section of the rural area (EAs near Kinistino and Christopher Lake) for Prince Albert have lower-mid (near Kinistino Lake shown in pink and yellow) to mid (beige), and high range scores (blue). Overall, there is no consistent pattern of scores for the rural area.

Overall, the maps indicate that the scores for the rural area are higher than the urban area in Prince Albert concerning communication skills and general knowledge. However, there is not a consistent pattern to the scores for the rural area.

## Emotional Health and Maturity

### Urban

Figure 2.6 (a) shows a consistent pattern of mid to lower- mid range scores (shown in pink, yellow and beige) throughout the urban area of Prince Albert for emotional health and maturity. The north-central and east-central sections of the urban area (Crescent Heights and Crescent Acres, Carlton Park, Midtown, East End, East Hill and a portion of the West Hill) have mid-range scores (beige). There are several EAs in the west-central and north-west sections with high scores (light green) and low scores (orange) for emotional health and maturity.

### Rural

Figure 2.6 (b) shows a fairly consistent pattern of lower to mid- (shown in yellow and beige) to high range scores (shown in blue) throughout the rural area of Prince Albert for emotional health and maturity. There are several EAs in the central south and central north areas (near Meath Park, Christopher Lake, Birch Hills, and Kinistino) with low (orange) to very low (shown in brown) scores. Some EAs are in the high range (blue), large number in the mid-range (shown in beige), and a very significant number in the low range (shown in orange and brown).

Overall, the urban and rural maps indicate a diverse range of scores: a number of EAs in the higher range, a large number in the mid-range, and a significant number in the lower range.

## Social Knowledge and Competence

### Urban

Figure 2.7 (a) shows a consistent pattern of higher scores throughout the central section of

the urban area of Prince Albert for social knowledge and competence. There are a number of contiguous EAs with very high scores in the east- and west-central sections of the urban area central (Carlton Park, Crescent Heights and Crescent Acres and East and West Hill). Moreover, there are lower mid-range scores in the northern urban EAs for Prince Albert.

### Rural

Figure 2.7 (b) shows a higher range of scores through the central and southern sections of Prince Albert for the rural area. The scores range from high to very high. There are several EAs in the north central and east central rural area with low to very low scores.

Overall, Figures 2.7 (a) and (b) the maps show that the rural areas score higher than the urban area for social knowledge and competence. It is important to note, however, that there is wider diversity in the range of scores for both the urban and rural maps for social knowledge and competence. Some children score in the higher ranges, but there are areas with lower mid-range and low scores for this developmental domain.

Overall, the children of Prince Albert score relatively well in comparison to the larger EDI-16 sample. The EDI maps indicate that overall the scores are higher in the rural compared to the urban areas of Prince Albert. The urban and rural maps depicting the EDI scores for the children in Prince Albert reveal that there is variability within and across the five EDI developmental domains. Some EAs score in the high to very high range whereas many score at the lower end of the continuum. Overall, the children in the Prince Albert study area score near the average of the first five UEY communities, not because their population is homogeneous, but rather because it is diverse.

We might expect children in areas of higher concentrations of population (urban areas) to interact more frequently with other children and with adults, to have access to more resources and facilities, and to have better outcomes in the measures of development. This is not the case in Prince Albert. Some of the children in the rural area consistently score higher than the children in more populated areas in terms of all outcomes measured.

The maps also indicate that socio-economic background is not a definitive predictor of EDI outcomes, and that other factors that influence children's development should be considered. It is likely that these outcomes can be more fully explained if additional family and community factors are taken into consideration.

## Figure 2.3a (Urban) – The Geographic Distribution of EDI Scores for Physical Health and Well-being

## Figure 2.3b (Rural) – The Geographic Distribution of EDI Scores for Physical Health and Well-being

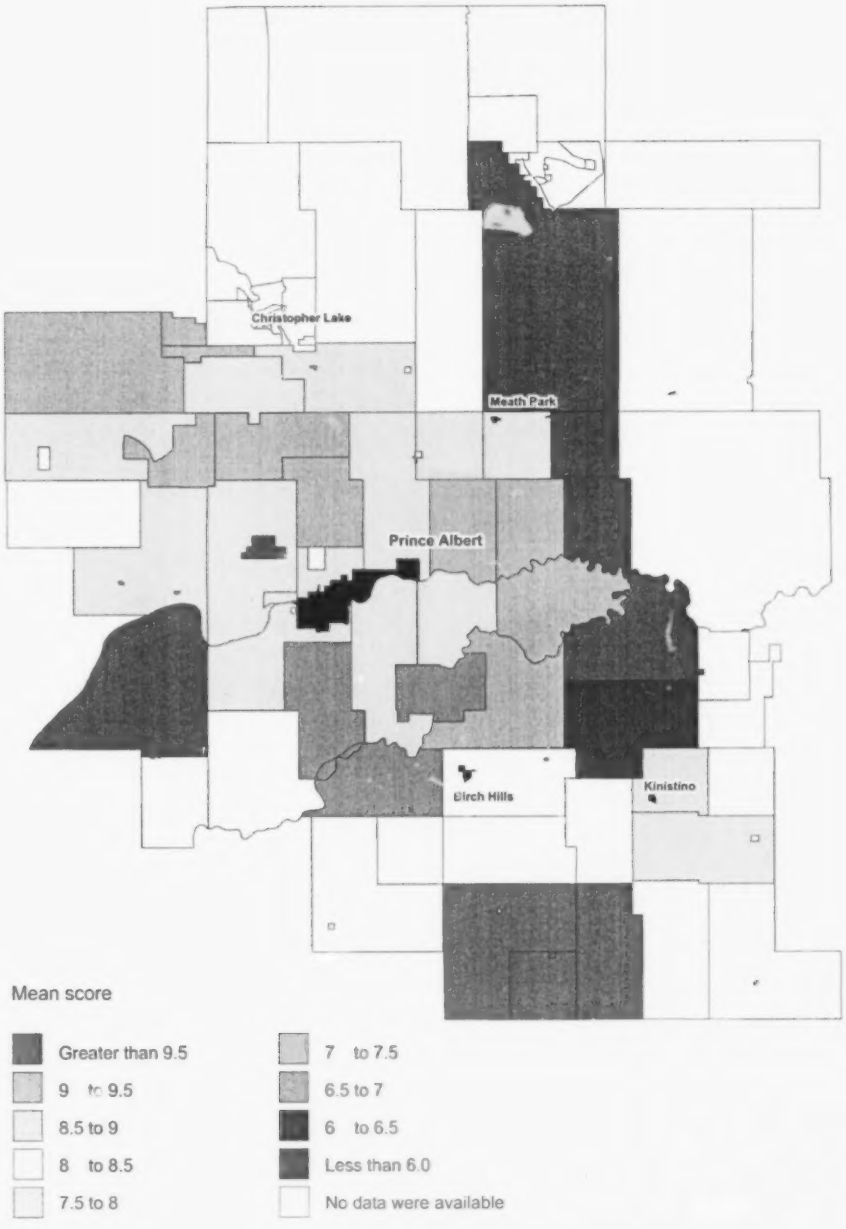
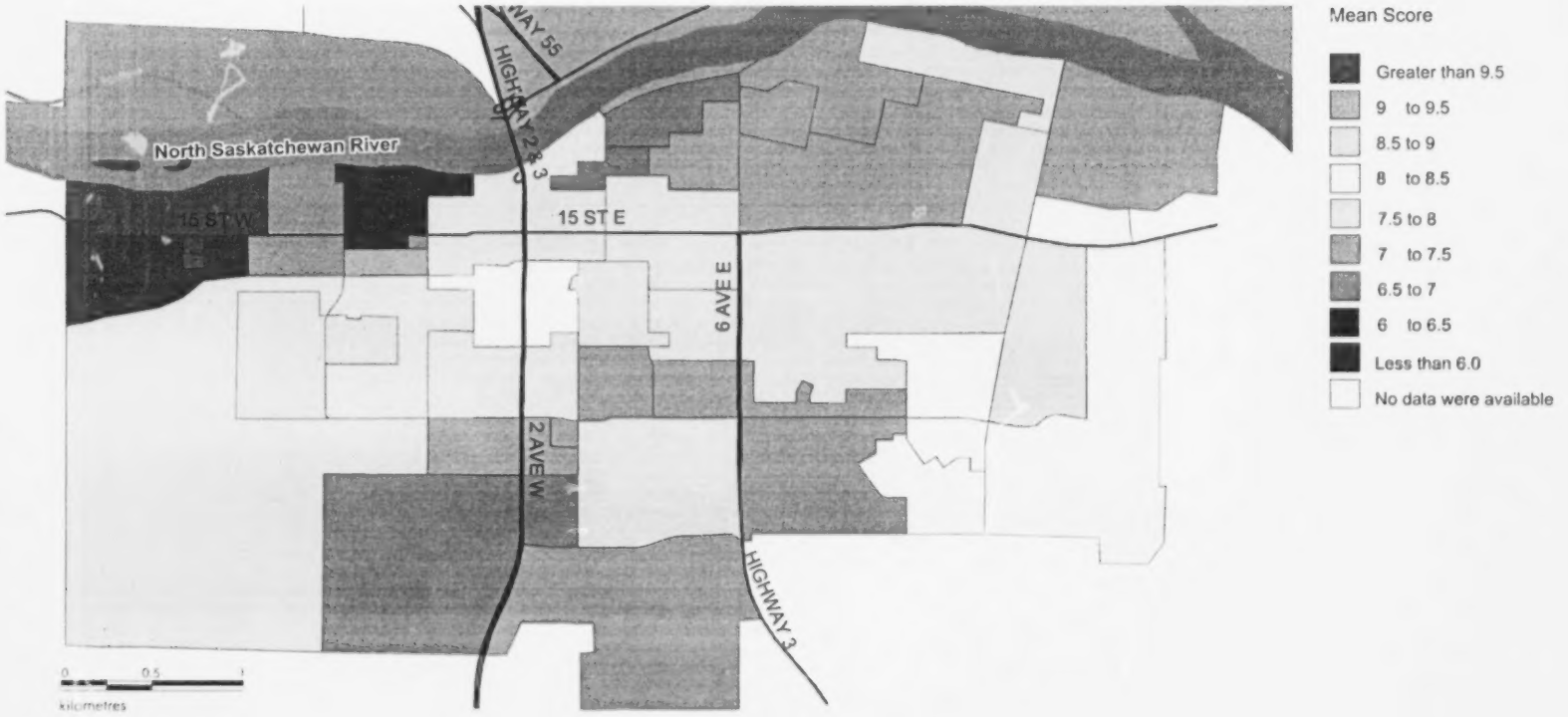


Figure 2.4a (Urban) – The Geographic Distribution of EDI Scores for Language and Cognitive Development



## Figure 2.4b (Rural) – The Geographic Distribution of EDI Scores for Language and Cognitive Development

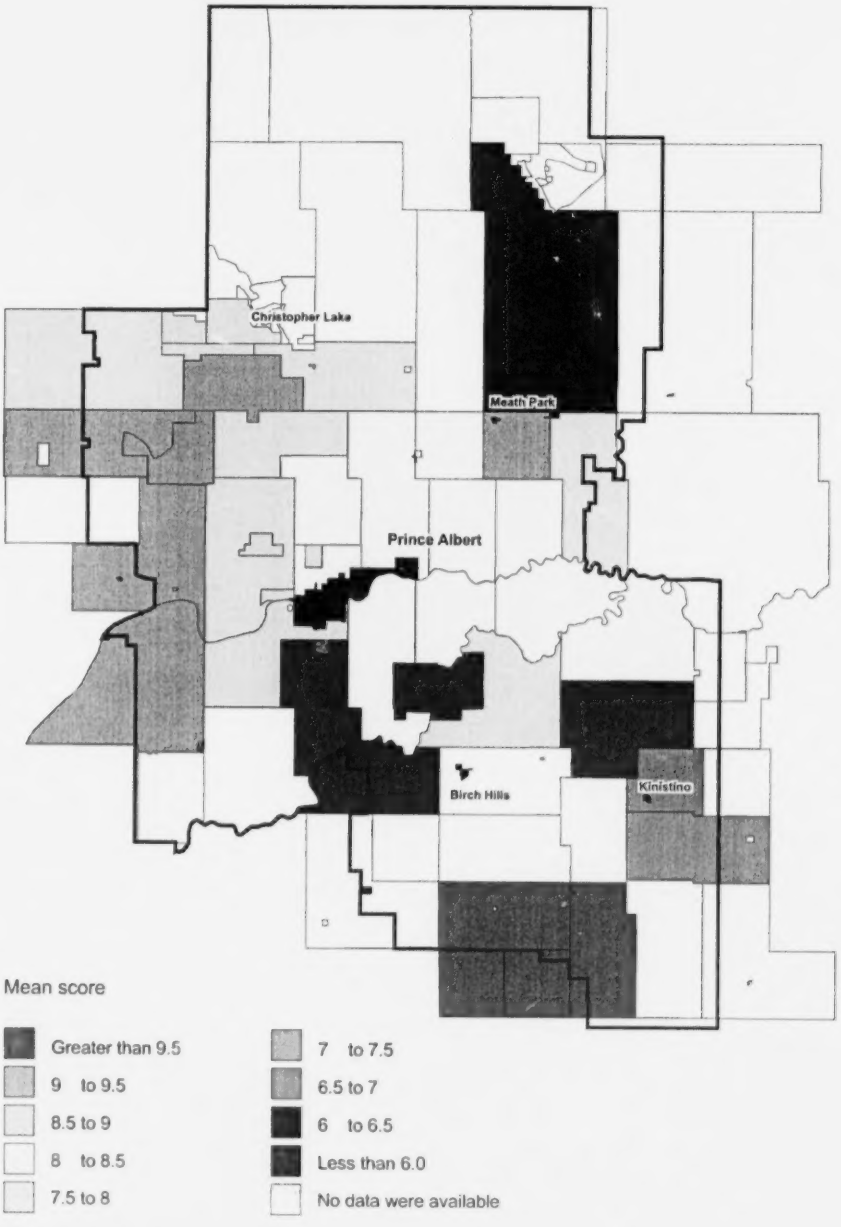


Figure 2.5a (Urban) – The Geographic Distribution of EDI Scores for Communications Skills and General Knowledge

## Figure 2.5b (Rural) – The Geographic Distribution of EDI Scores for Communication Skills and General Knowledge

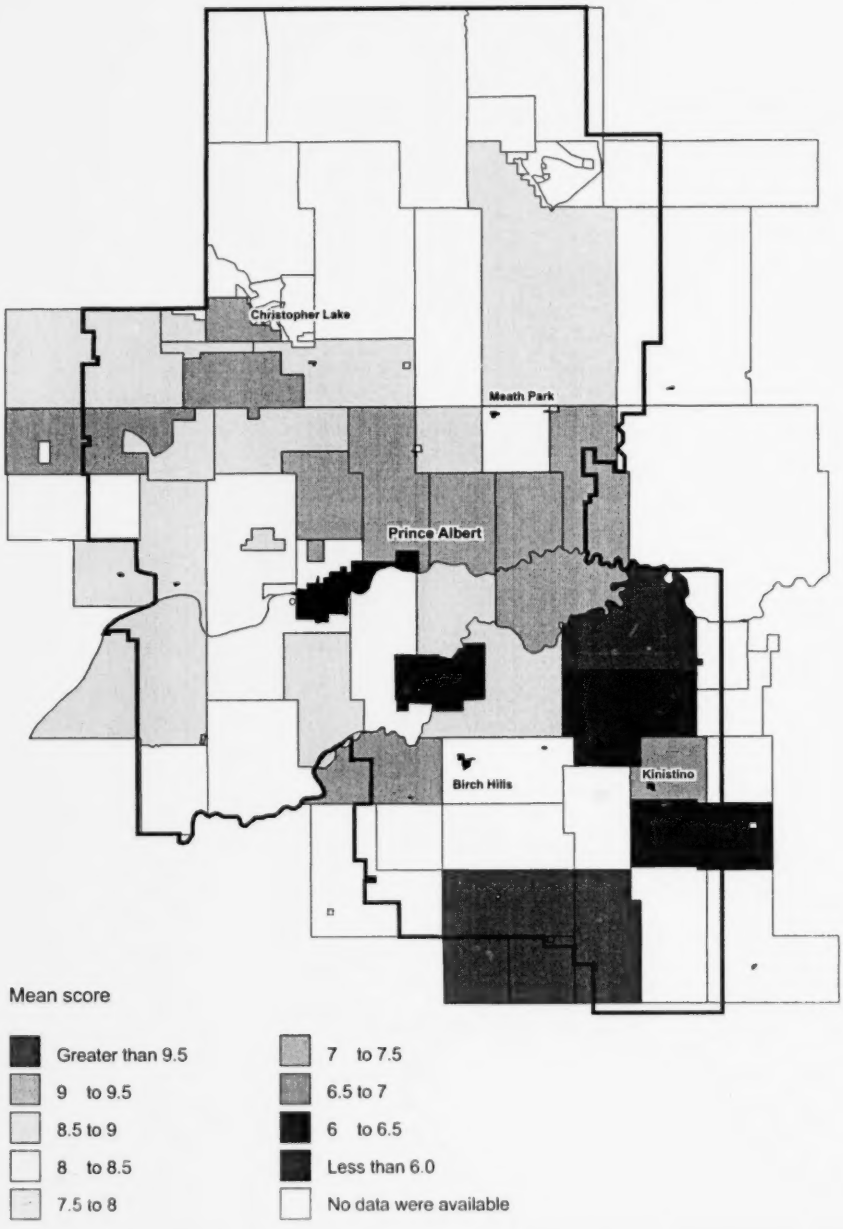
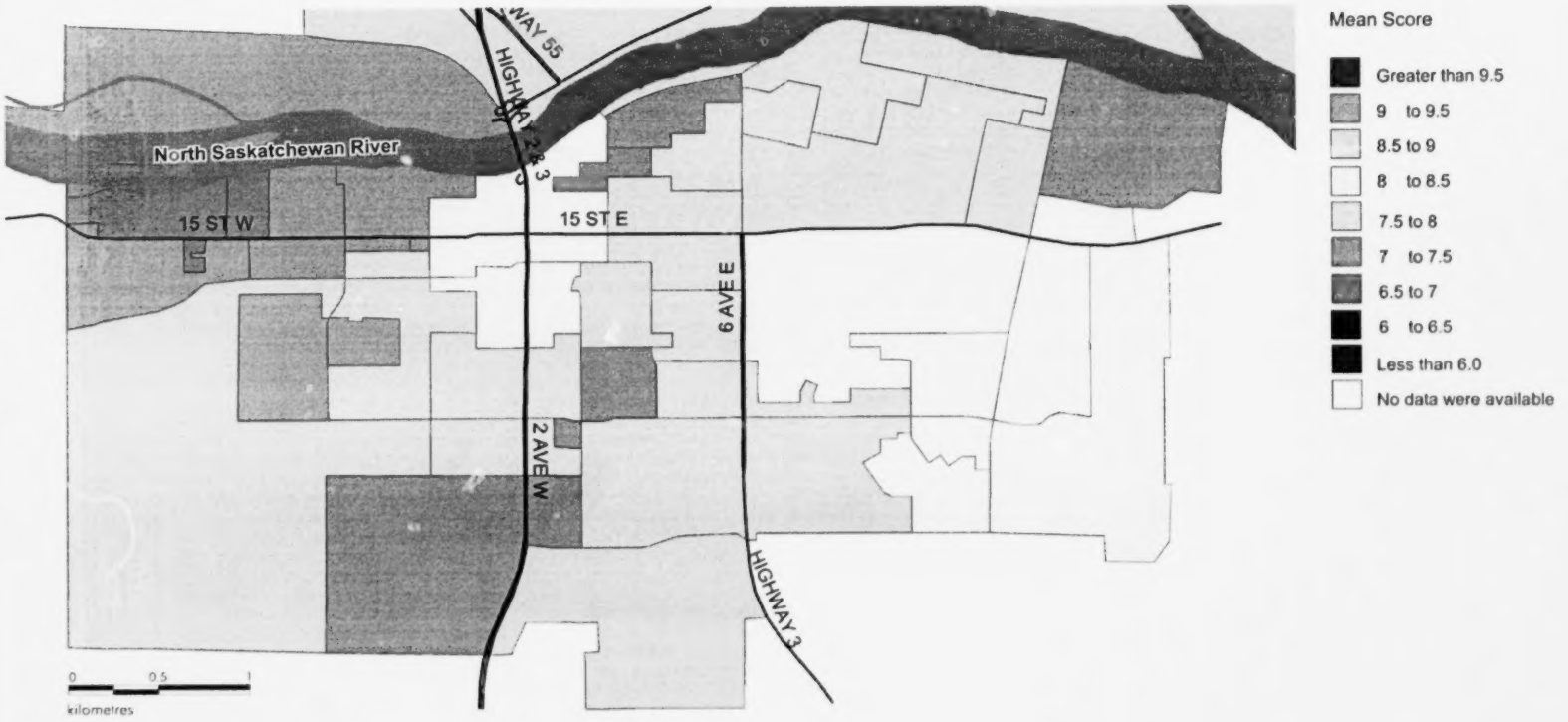
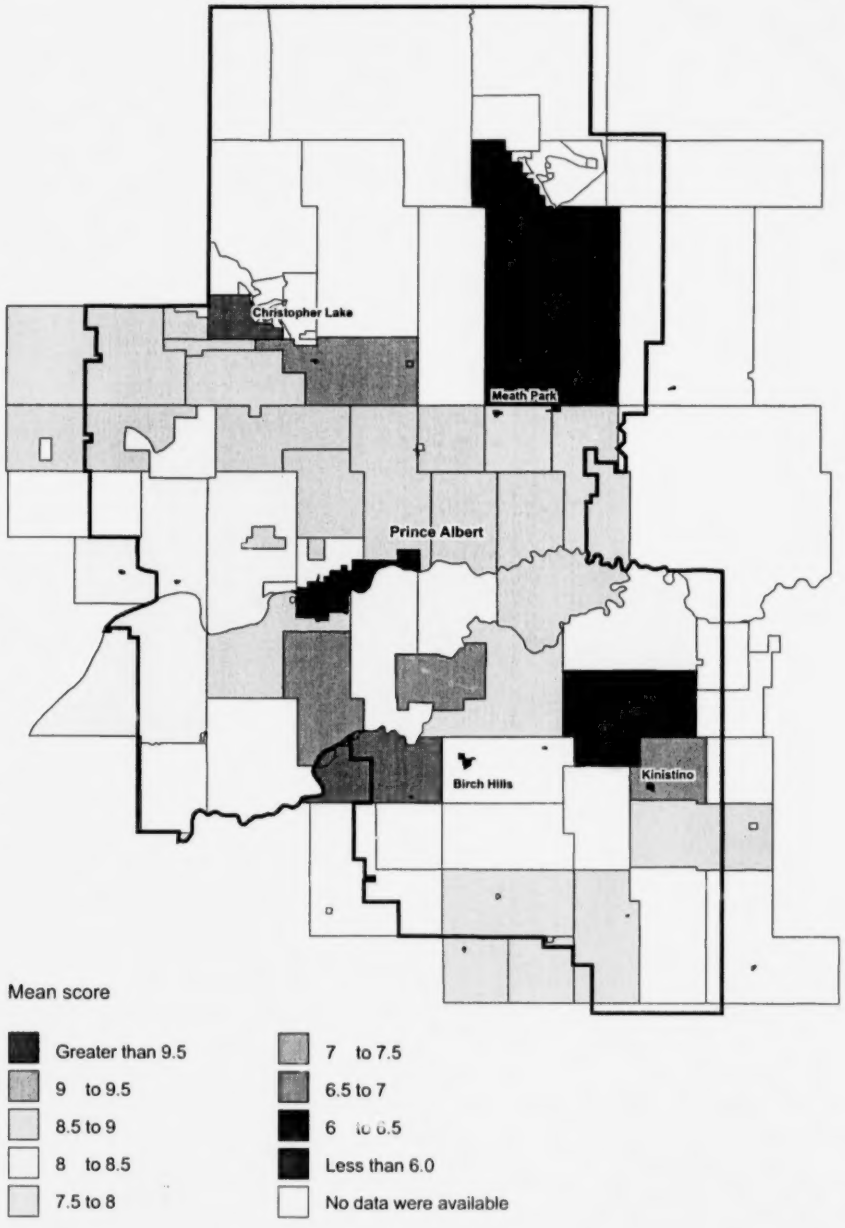


Figure 2.6a (Urban) – The Geographic Distribution of EDI Scores for Emotional Health and Maturity

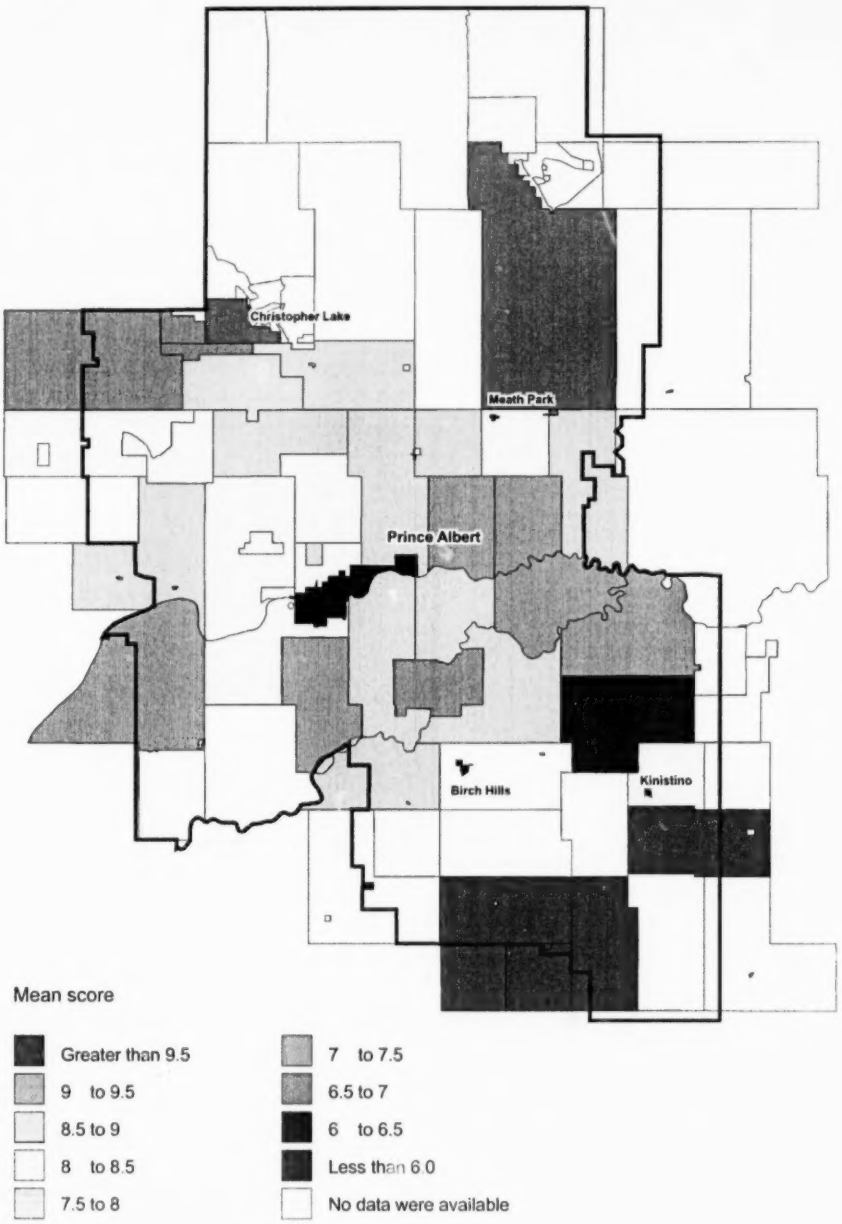


## Figure 2.6b (Rural) – The Geographic Distribution of EDI Scores for Emotional Health and Maturity



## Figure 2.7a (Urban) – The Geographic Distribution of EDI Scores for Social Knowledge and Competence

## Figure 2.7b (Rural) – The Geographic Distribution of EDI Scores for Social Knowledge and Competence



## C. What we learned from parents, guardians, and the children: NLSCY Community Study results

In this section, we discuss the results of the National Longitudinal Survey of Children and Youth Community Study, which measures children's cognitive skills, positive social behaviour, and behaviour problems.

Table 2-2 displays the means and standard deviations of scores on the *Developmental Assessment (Who Am I?)*, on the *Positive Behaviour Scale*, and on the *Receptive Language (PPVT-R) Test* from the NLSCY for Prince Albert.

Children in Prince Albert scored just above the national mean for positive behaviour (100.3) and the standard deviation was .9 points below the national standard deviation indicating less variability. The scores on two of three measures for Prince Albert are below 100, indicating that the children achieved scores below the national mean (see Inset 5). For example, based on the Who Am I?, children in Prince Albert scored 4.1 points below the national mean on cognitive development; and based on the PPVT-R, 2.5 points below the national mean on receptive vocabulary. Figure 2.8 displays the distribution of scores.

**Inset 5**

**For the *Receptive Language Test*, national norms were available, and the scores are scaled such that the national mean is 100, and the standard deviation (a measure of the spread of scores) is 15. National norms were not available for the *Development Assessment (Who Am I?)* or the *Positive Behaviour Scale*, but to maintain some degree of comparability, the scores were scaled to have a mean of 100 and a standard deviation of 15 for the entire sample of children who participated in the first five studies of the UEY project (see Table 2-2).**

Figure 2-9 shows the distribution of children with low scores on the *Developmental Assessment (Who Am I?)*, the *Positive Behaviour Scale*, and the *Receptive Language Test*. It also shows the percentage of children deemed to have a behaviour problem, based on four measures of behaviour (hyperactivity, emotional disturbance/anxiety, aggression/ conduct disorder, and indirect aggression).

For each measure, the score at the 10th percentile of the national NLSCY was used as

Table 2.2 – **Mean Scores on Standardized Instruments from the NLSCY for Prince Albert UEY Community**

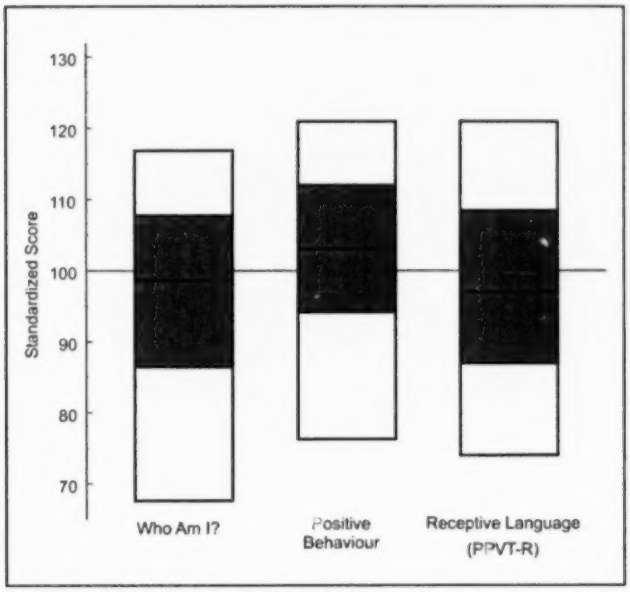
| | Mean | Standard Deviation |
|---|---|---|
| Who Am I? (N=420) | **95.9** | 15.1 |
| Positive Behaviour (N=414) | 100.3 | 14.1 |
| Receptive Vocabulary (PPVT-R) (N=427) | **97.5** | 15.4 |

*Source: NLSCY (cycle 3) data, 1999-2000.*
*Note: Figures in blue are significantly different from the national standardized mean of 100.*

the threshold to define a low score. The percentage of children in the community scoring below the threshold provides a means of comparing against the 10% scoring below the threshold nationally.

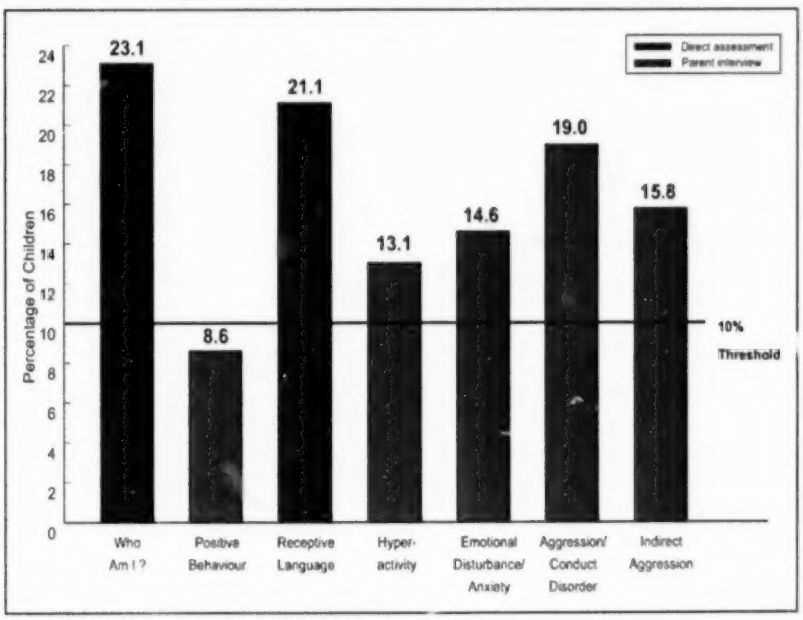
In Prince Albert, the percentage of children with cognitive difficulties, based on the *Who Am I?* and the *Receptive Language Test* were 23.1% and 21.1% respectively, which is considerably higher than the 10% threshold. There were also more children in this community with behaviour problems: while 8.6% had low scores on the *Positive Behaviour Scale*, between 13.1% and 19.0% had low scores on the problem behaviour measures, all above the 10% threshold. Overall, while the children in this community, on average, fare well compared with children of the same age living elsewhere in Canada for EDI outcomes, more children in Prince Albert are grouped in the lower range of scores for the NLSCY measures.

Figure 2.8 – **Box plots comparing the distribution of Scores on the Who Am I?, Positive behaviour, and the PPVT-R.**




*Source: NLSCY data (cycle 3), 1999-2000.*
*Note: See Inset 3.*

Figure 2.9 – **Percentage of Children with Low Scores on the Cognitive and Behavioural Measures (Prince Albert)**




*Source: NLSCY data (cycle 3), 1999-2000*
*Note: Children were directly assessed for the Who Am I? And Receptive Language (PPVT-R)*

The study also included a direct measure of a child's understanding of the system of whole numbers. Scores were classified according to developmental levels:

a) Have not reached level 1

b) Reached level 1 (usually attained by 4-year-olds)

c) Reached level 2 (usually attained by 6-year-olds)

d) Reached level 3 (usually attained by 8-year-olds)

For all of the children who did the assessment, across the five UEY sites, only 1.2% had failed to reach level 1. A minimal number of children were below Level 1, about a third (29.4%) were at Level 1, and two-thirds (67.2%) were at Level 2. Only 2.2% of the UEY children had reached level 3. These results are as expected given that the UEY children were 5 and 6 years old.

In Prince Albert, 60.8% of the children sampled had made the transition to at least level 2, which is considerably lower than the UEY average of 69.4%.

Overall, these findings also indicate that the children of this community scored at or below the mean compared to the children in the national sample. The scores on the test of *Receptive Language Test* are especially telling, because they are based on a test administered to children using a standard method and can be compared with scores of other children in the country. The median score on this test was about 3 points below the national median, and there was a much greater range of scores below the median than in the national sample. The results of the *Who Am I?* also indicate that the children in this community, on average, scored lower than children in the other UEY communities. The higher percentage of children scoring below the national 10% score, are of concern.

# IV. How Family Background Affects Children's Readiness for School

In this section, information about the relationship between family background and children's outcomes is presented, and the family background of the children in Prince Albert is described. The relationship between family background and children's outcomes is not straightforward. An important goal of *Understanding the Early Years* is to distinguish among the effects of *family background*, and those associated with *family processes* and *community factors* on children's outcomes.

All three sets of contributing factors were measured. First, information on eight characteristics of *family background* are presented. In an earlier study of children's development, based on the national sample of children who participated in the first cycle of the NLSCY, these family background characteristics were significantly related to a range of children's developmental outcomes. The values, calculated from the eight family characteristics, are:

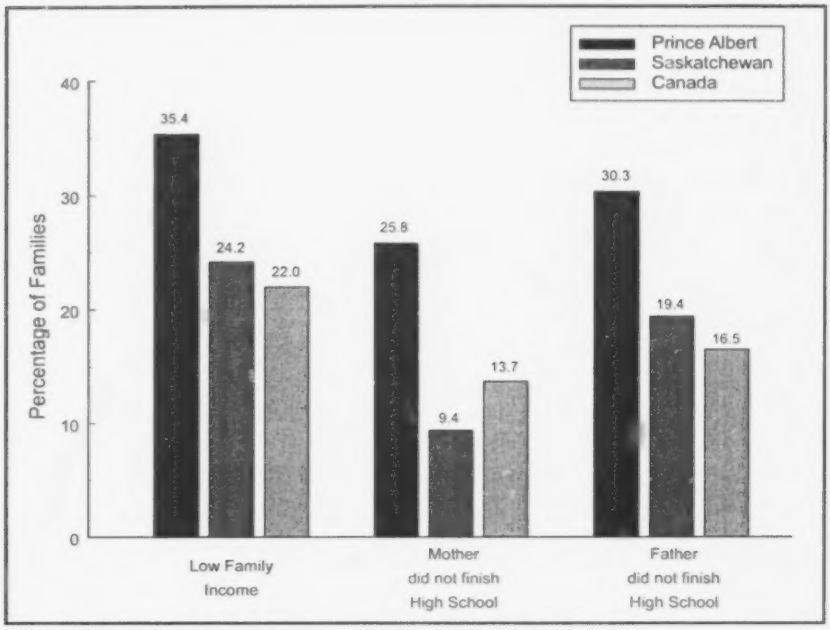
- **Family income** (in $10,000 units): considered to be low if less than $25,000.
- **Mother's level of education**: considered to be low if the mother did not complete high school.
- **Father's level of education**: considered to be low if the father did not complete high school.
- **Mother's employment status**: considered *not* working outside the home if the mother worked fewer than 25 weeks during the past year.
- **Father's employment status**: considered *not* working outside the home if the father worked fewer than 25 weeks during the past year.
- **Single-parent family**: only one parent or guardian living at home
- **Number of brothers and sisters**: this is a simple count of the number of siblings living at home.

Figures 3-1 and 3-2 show the relative levels of income, education, employment, and single-parenthood for families in the community, as well as provincial and national levels. These findings are consistent with the findings presented in the first section, which characterized this community as relatively disadvantaged in socio-economic terms. For example, about 35% of families were considered low-income, compared to about 24% in Saskatchewan, and 22% in Canada overall.

More children's mothers had completed high school (74.2%) than fathers (69.7%) in Prince Albert. However, compared to both provincial and national averages, parents in this area had relatively low levels of education. Also, fewer mothers than fathers worked outside the home.

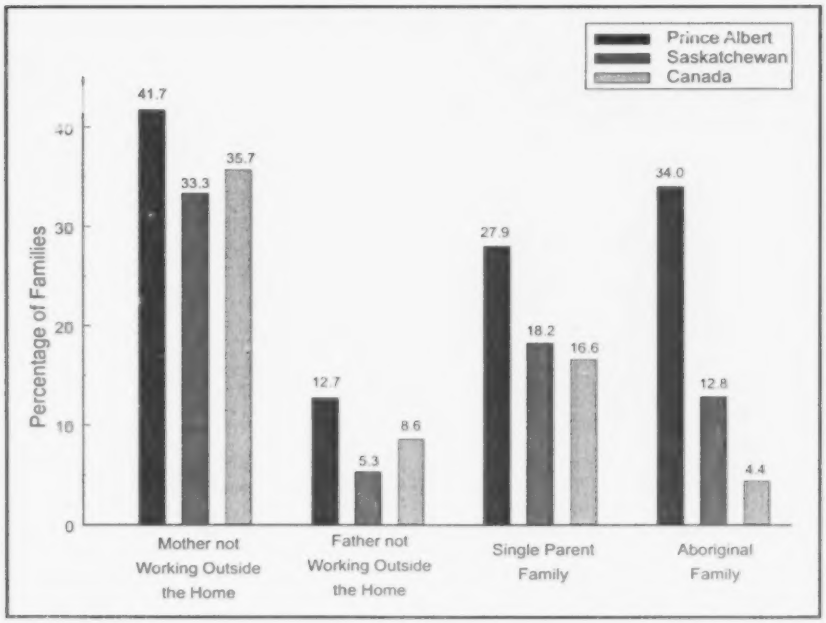
Unemployment levels are slightly higher than provincial and national averages for both mothers and fathers in this area. Almost 42% of mothers, and almost 13% of fathers, did not work outside the home. Some 34% of families are of Aboriginal origin, and about 28% of families were headed by a single parent (NLSCY-CS for Prince Albert, 1999, cycle 3 data).

Figure 3.1 – Family Income and Parents' Education




*Source: NLSCY for PEI (1999-2000) and national NLSCY (cycle 3).*

Figure 3.2 – Parents' Employment and Marital Status




*Source: NLSCY for PEI (1999-2000) and national NLSCY (cycle 3).*

It is likely that the number of children living in low-income, single-parent households is fairly high. Prince Albert children fare well overall on the outcomes measured. This finding contradicts what many might expect, if they assume that socio-economic and demographic factors alone explain why some children are better prepared in their cognitive and behavioural skills when they enter school.

## A. The Effects of Family Background Factors on Readiness

The analysis focussed on the factors contributing to whether or not a child had significantly low scores in one of the three developmental domains: the cognitive domain, the behavioural domain, and physical health and well-being.

A child was considered "ready" in the cognitive domain if he or she did not have a low score (e.g., below the 10% threshold) on the *Receptive Language Test*, the *Developmental Assessment (Who Am I?)*, or on the two cognitive domains of the Early Development Instrument.

Similarly, a child was considered ready to learn in the behavioural domain if he or she did not have a low score on the behaviour scale, or on either of the two domains of the EDI pertaining to behaviour, and did not have any one of the four behaviour problems.

A child was considered ready to learn in the physical health domain if he or she scored above the low-score threshold on the Physical Health and Well-being domain of the EDI.

For each of the family background factors, the odds-ratio associated with whether a child was ready in these three domains were estimated (see Table 3-1) using the sample of children from all of the first five UEY communities. In other words, the results indicated in Table 3-1 are not specific to Prince Albert.

**Inset 6 - Odds-ratios**

Odds-ratios denote the ratio of the odds of an event occurring after a one-unit change in the independent variable, compared with what it had been previously, if all other independent variables in the model are held constant.

For example, suppose the outcome variable of interest was whether a child repeated Grade 1. If the odds ratio for mother's education were .95, it would indicate that the odds of a child repeating a grade, if his or her mother had 13 years of education, is only 95% as large as the odds for a child whose mother had completed 12 years of education (or 12 years compared with 11 years, etc.). Thus, in this example, increasing levels of maternal education reduce the odds of a child repeating Grade 1. When an odds-ratio is greater than 1.0, it indicates that the odds of experiencing the outcome (e.g., repeating Grade 1) are greater with increasing levels of the factor being considered.

Table 3.1 – The Relationship Between a Child's Readiness to Learn and Family Background

| | Children's Outcomes | | |
|---|---|---|---|
| | Cognitive | Behavioural | Physical Health & Well-being |
| Family Income ($10,000 units) | **1.16** | **1.11** | 1.02 |
| Mother's Education (years) | **1.10** | 1.02 | **1.10** |
| Father's Education (years) | 1.04 | 0.99 | 1.10 |
| Mother Not Working Outside Home | 0.98 | 1.15 | 1.11 |
| Father Not Working Outside Home | 1.22 | **1.48** | 1.17 |
| Single Parent Family | 0.98 | 0.96 | 0.70 |
| Number of Brothers and Sisters | **0.90** | **0.91** | **0.81** |

*Source: NLSCY in relation to 3 EDI domains for the first five UEY communities, 1999-2000.*
*Note: Figures in blue text are statistically significant at p<.10.*

The results indicate that family income and the educational level of the mother are strong determinants of cognitive development.

For example, the odds of being ready to learn for a child living in a family with an income of $40,000 is about 16% greater than a child who had similar background characteristics, but had a family income of $30,000.

Similarly, each additional year of education of a child's mother increases the odds of being ready by about 10%. In contrast, children with more siblings were more likely to have a low score on at least one of the cognitive measures. Each additional brother or sister decreases the odds of being ready to learn by about 10%.

The results for the behavioural domain are similar. Family income and small family size are protective factors; that is, they increase the likelihood that a child will not have a behaviour problem upon entry to school. However, the mother's level of education was not statistically significant. The results also indicate that children whose fathers are unemployed were more likely to be ready for school. This finding is somewhat surprising; however, it may be that fathers who are unemployed are more likely to spend time engaged with their children in activities which have a positive effect on their behaviour.

With respect to physical health and well-being, two factors emerged as statistically significant: mother's education and number of siblings. Children were less likely to have experienced problems in this domain if their mothers had a high level of education, and if they had relatively few brothers and sisters.

Given the relationship between children's outcomes in these domains with family income and maternal education, and the relatively low income and levels of education of the families in Prince Albert, children are performing relatively well in this community. It suggests that there may be many other aspects of family and community life that have influenced children's outcomes. We examine theses factors in the next section.

# V. What Families and Communities in Prince Albert Can Do to Improve Children's Outcomes

Many studies of childhood outcomes have been based on investment theory, an economic theory that supposes that children receive an endowment from their parents. This includes biological attributes and a cultural endowment determined by their parents' norms, values, and preferences; their income and wealth; and their access to resources. Parents invest time and money in their children, primarily through expenditures on education and health care.

Although the emphasis of investment theory has been on the transmission of earnings and wealth from one generation to the next, the idea that children's social, emotional, and intellectual development depends on parents' investments is firmly rooted in the child development literature. These investments can include, but are not limited to, time spent with children.[12]

Other theories suggest that childhood outcomes result from family and parenting practices. Children are less likely to have behaviour problems or poor cognitive development if their parents are supportive, responsive, and affectionate.

Parents who are depressed or severely stressed are more likely to be tense and irritable with their children, and become less engaged in activities that contribute to their emotional and intellectual development. Marital relations become strained, and the overall ability of the family to function as a cohesive unit becomes compromised. These pressures also affect children's development.

Recent research based on the NLSCY,[13] as well as analyses of the UEY communities' data reported here, consider the influence of both family processes and community factors on childhood outcomes.

The most important family processes include the parents' "style" of parenting, maternal depression, the cohesiveness or adaptability of the family, and the extent to which children are regularly engaged with learning activities.

Child care also plays a critical role. Many children have better outcomes if they have quality daycare, especially those from families of low socio-economic status.

Parents' ability to provide a supportive environment can be either helped or hindered by the neighbourhood and wider community. The quality and safety of the neighbourhood is important, but social factors also play a role.

Subsequently, we are interested in the degree of social support available to parents, and the extent to which parents have access to information and support through a strong network of friends and colleagues – factors embodied in the term "social capital". Social support and high levels of social capital are easier to build in a community when the population is not transient; thus, we also expect that child development may be affected by the extent to which the population is stable.

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[12] McCain, M.N., & Mustard, J.F. (1999). *Reversing the Real Brain Drain: Early Years Study Final Report.* Publications Ontario.

[13] Willms, J. D. (in press). *Vulnerable Children: Findings from Canada's Longitudinal Study of Children and Youth.* University of Alberta Press.

Finally, children's development is more likely to flourish if families have access to educational, cultural and recreational resources. These are important not only because they contribute directly to children's development, but also because they foster social support and increase social capital within the community.

As we have seen in the previous two sections, the children in Prince Albert fared well on the outcome domains, compared to the national NLSCY sample and the EDI-16.

This is at odds with what one might expect, given the range of socio-economic conditions in which they are living. Many of the children live in less affluent families than most other Canadian children, and on average their parents have lower levels of education, and less regular, full-time employment. The percentage of children living in single-parent homes is higher than the Canadian average. Therefore, factors other than those associated with their immediate socio-economic status must also be at play.

The strategy was to combine a large number of family and community variables into ten indicators that are essential for successful child development. These indicators had to meet two criteria:

- There had to be evidence that the indicators were related to children's developmental outcomes, either from previous literature, or through analyses of the UEY and NLSCY data.
- They had to be amenable to change through the efforts and actions of families and communities, through the support of community and volunteer agencies, and through social policy at the local, provincial and national levels.

In this section, the ten indicators are described; the results of the analyses with the UEY data are presented, which give some indication of the relative importance of these factors; and the scores on these indicators for the Prince Albert community are shown.

## A. Ten Indicators of Family and Community Success

Each of the indicators is presented with scores ranging from 0 to 10, with 10 being the highest positive score.

### 1) Positive Parenting

This indicator was based on research that has shown that children have better developmental outcomes when their parents monitor their behaviour, are responsive to their needs, and encourage independence with a democratic approach.

This "style" of parenting, called "authoritative" parenting, stands in contrast to "authoritarian" parenting, characterized by parents being highly controlling and somewhat harsh in their approach to discipline, and "permissive" parenting, characterized by parents being overly-indulgent and setting few limits for behaviour.[14]

The scale includes items assessing the extent of positive interactions – how often the parents praise the child, how often they talk and play with them, and how often they laugh together. It includes items pertaining to whether parents are consistent and rational in their approach.

For example, parents were asked about situations when their child was misbehaving: were they likely to raise their voice, scold or yell at their child, calmly discuss the problem, or

[14] Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance abuse. *Journal of Early Adolescence, 11(1)*, 56-95.

discuss alternate ways of behaving? Did they often have to punish their child repeatedly for the same behaviour? Did their punishment depend on the mood they were in?

## 2) Parental Engagement

This indicator measures the extent to which parents are engaged with their child in learning activities. It includes information on whether and how often parents tell stories to their children, teach them letters and numbers, teach them how to read, and encourage them to use numbers in their day-to-day activities. It also measures whether and how frequently children look at books and magazines, discuss them with their families and friends, and write or pretend to write with markers or pencils.[15]

## 3) Family Functioning

The concept of family functioning refers mainly to the cohesiveness and adaptability of the family. It concerns how well the family functions as a unit, more so than the relationships between spouses, or between parents and their children. A number of studies have shown that family functioning is related to children's developmental outcomes, especially children's behaviour.

In this study, it is assessed with twelve items pertaining to a family's ability to communicate, make decisions and solve problems as a group, discuss feelings and concerns, get along together, and feel accepted for who they are.

## 4) Maternal Mental Health

The well-being of parents affects their parenting style and ability to respond to and engage their children in various learning activities.[16] Mothers' well-being has a stronger effect on children's outcomes than fathers' well-being.

This indicator was based on twelve items which are commonly used to measure depression. For example, it includes questions about whether the person regularly experiences feelings of depression and loneliness, crying spells, low energy levels, an inability to concentrate and sleep, and sense of being disliked by others. The scores were coded such that high scores indicate positive mental health; that is, the absence of depressed feelings.

## 5) Social Support

The level of social support available to parents affects their well-being, and indirectly affects their ability to function as parents and as role models within their family and community.

This indicator measures the level of support available to the respondent, and describes how much support that person receives from a community of friends and family members.

To determine this, respondents were asked whether they can get help in various situations, including emergencies; whether they are able to confide in and seek advice from others; whether they feel close to another person; and whether they feel they are a member of group of people whose attitudes and beliefs they share.

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[15] McCain, M.N., & Mustard, J.F. (1991). *Reversing the Real Brain Drain: Early Years Final Report*. Publications Ontario.

[16] Brooks-Gunn, J., Dunca, G.I., & Britton, P.R. (1999). Are Socio-economic Gradients for Children Similar to Those for Adults? Achievement and Health of children in the United States. In D.P. Keating's & C. Hertzman's (Eds.) *Developmental Health and the Wealth of Nations*. The Guilford Press: New York.

### 6) Social Capital

A separate, but related indicator, social capital is a measure of the level of support available, collectively to groups within a community. Thus, it comprises information about the ability of neighbours to work together to solve problems, help each other, watch out for one another's children, and provide children with role models outside their immediate families.

### 7) Neighbourhood Quality

This indicator gauges the parents' perception of their neighbourhood as a place to raise children. It measures features such as cleanliness, safety, quality of schools and nursery schools, adequacy of facilities for children (such as pools and playgrounds), health facilities, and the level of involvement of residents. It also asks people to rate their neighbourhood in comparison with neighbourhoods they had lived in previously.

### 8) Neighbourhood Safety

This indicator assesses the level of the parents' concern for children's safety in their neighbourhood. For example, parents were asked about the safety of parks and other play spaces, crime rates, problems with older children in the neighbourhood, and whether they worried about children playing outside during the day.

### 9) Use of Resources

This indicator measures the use of *recreational facilities* including parks, trails, play-spaces, skating rinks, pools, camping areas, skiing facilities, amusement parks, and community centers; *educational services* such as libraries, science centers, family resource centers, and drop-in programs; and *cultural resources*, such as art museums, plays, musical performanc sports events and movies.

### 10) Residential Stability

This factor was derived from a factor analysis of four variables measured as part of the 1996 Canadian Census that assessed the degree of transience of the local population. These included the proportion of people who had moved in the past five years or the past year, as well as the percentages of single parents and elderly in the neighbourhood. It was scaled in positive terms, such that a high score indicates greater stability. The average score for all enumeration areas in Canada is 5 on the 10-point scale.

## B. The Relationship between Neighbourhood Factors and Children's Outcomes

In the third section, statistical tools were used to estimate the relationships between family background factors and children's readiness to learn in three developmental domains: the cognitive domain, the behavioural domain, and physical health & well-being.

In this section, the analysis was extended to include the ten family and neighbourhood factors described previously. This is a fairly conservative test of the effects of these factors, as the analysis is essentially asking, "What are the effects of these factors, after taking account of children's family backgrounds?"

As in Section III, the results are presented as odds-ratios (see the Inset in Section III). For the ten scales describing family processes and neighbourhood factors, these provide an estimate of the effect associated with a one-point increase on the respective scale. The results, which are based on data from the first five UEY communities, are presented in Table 4-1.

The co-efficients in Table 4.1 are slightly lower than in Table 3.1 because community factors are correlated with family background. For example, a family with a higher income generally lives in a relatively safer neighbourhood with a higher neighbourhood quality.

Table 4.1 – **The Relationship Between Readiness to Learn Outcomes and Family Background, Family Processes, and Community Factors**

| | Five UEY Communities' Children's Outcomes | | |
|---|---|---|---|
| | Cognitive | Behavioural | Physical Health & Well-being |
| ***Family Background*** | | | |
| Family Income ($10,000 units) | **1.14** | **1.08** | 1.02 |
| Mother's Education (years) | **1.07** | 0.99 | 1.07 |
| Father's Education (years) | 1.04 | 1.00 | **1.13** |
| Mother Not Working Outside Home | 0.97 | **1.24** | 1.13 |
| Father Not Working Outside Home | 1.18 | **1.38** | 1.17 |
| Single-Parent Family | 1.01 | 1.00 | 0.70 |
| Number of Brothers and Sisters | 0.92 | 0.96 | **0.84** |
| ***Family Processes*** | | | |
| Positive Parenting Practices | 1.07 | **2.31** | **1.37** |
| Engagement in Learning Activities | **1.10** | 1.01 | 1.08 |
| Family Functioning | 0.98 | 1.05 | **0.86** |
| Maternal Mental Health | 0.98 | **1.12** | 0.99 |
| ***Community Factors*** | | | |
| Social Support | 1.02 | **0.87** | 1.07 |
| Neighbourhood Quality | 1.03 | 1.01 | 1.00 |
| Safe Neighbourhood | 1.02 | **1.12** | 0.93 |
| Social Capital | 1.01 | 1.06 | 1.06 |
| Use of Resources | **1.11** | 1.04 | 1.10 |
| Residential Stability | **1.06** | 1.02 | **1.13** |

*NLSCY in relation to 3 EDI domains for the first five UEY communities.*
*Note: Figures in blue text are statistically significant at p<.10.*

Of the ten factors, three have statistically significant relationships in the *cognitive domain:*engagement in learning activities, use of community resources, and residential stability.[17]

The engagement in learning results suggest that a child in a family with a rating of 6.0 on the 10-point scale would be 10% more likely to be ready to learn in the cognitive domain than a child living in a family with a rating of 5.0 (or a family rated 5.0 instead of 4.0, etc.). This means that parents who spend time reading to their children, and teaching them numbers and letters, have children with better cognitive scores.

Similarly, an increase of one-point in "use of community resources" was associated with an 11% increase in cognitive scores. In other words, families that make use of various recreation, educational and leisure facilities, such as pools, play-spaces, libraries, drop-in programs, art museums and movies, have children with better cognitive scores.

Similarly, an increase of one point in residential stability was associated with a 6% increase in readiness to learn, which indicates that families with fewer moves have children with higher cognitive scores.

[17] Numbers above 1.0 indicate a positive relationship whereas numbers below 1.0 indicate a negative relationship.

For the *behavioural domain*, positive parenting was by far the most important factor. A one-point increase on the positive parenting scale was associated with a dramatic increase of 131% in good behaviour outcomes. This means that parents who monitor their children's behaviour, are responsive to their needs, and encourage independence, are much more likely to have children without behaviour problems.

Two other factors had statistically significant and positive effects: the mental health of the mother, and living in a safe neighbourhood. Each of these factors was associated with a 12% increase in the likelihood of a child being ready in the behavioural domain. This means that mother with good mental health and families who live in safe neighbourhoods had children with fewer behavioural problems.

Social support had effects contrary to expectations. This may have arisen because parents whose children have behavioural problems may be more aware of the social support available to them, and therefore reported higher levels of support.

Residential stability also had a positive effect, meaning that children living in stable neighbourhoods were more likely to have positive health outcomes. The effects of family functioning were anomalous in this case, suggesting that families who have a child with health problems are more likely to be cohesive and adaptable.

Finally, for physical health and well-being, positive parenting again emerged as the most important factor. The analysis indicates that a one-point increase in the positive parenting scale is associated with a 37% increase in the likelihood of a child being ready to learn in this domain.

## C. Community Indicator Scores for Prince Albert

Figure 4-1 displays the Prince Albert scores for each of the ten indicators described in this section. The figures in parentheses indicate the average scores for the five UEY communities.

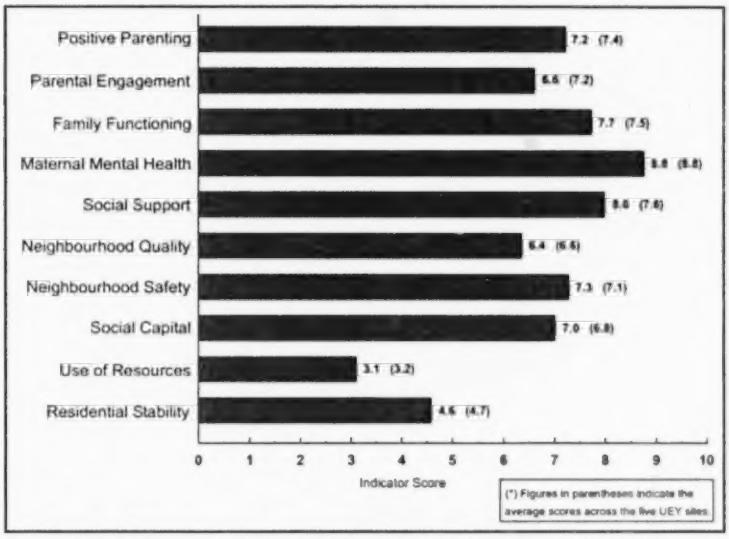
The family and community indicator scores for Prince Albert were higher than the average for the five UEY communities on 4 of the 10 measures used: family functioning, social support, social capital, and neighbourhood safety. Moreover, their scores were high on maternal mental health, 8.8 on a 10-point scale, the same as the combined average for the first five UEY communities (8.8 on a 10-point scale).

With the exception of maternal mental health, the scores for Prince Albert were not particularly high on any of the indicators. However, they were also not dramatically low either. For all but two of the indicators, the scores are within 0.2 of the UEY average. The largest difference between Prince Albert's results and the UEY average for the five communities was in parental engagement, where they received a score of 6.6, as compared to 7.2. However, Prince Albert had a higher score for social support, which was .4 above the UEY average.

Thus, despite its relatively low income and levels of parental education, this community is comprised of safe, and close-knit neighbourhoods, with high levels of social capital and social support.

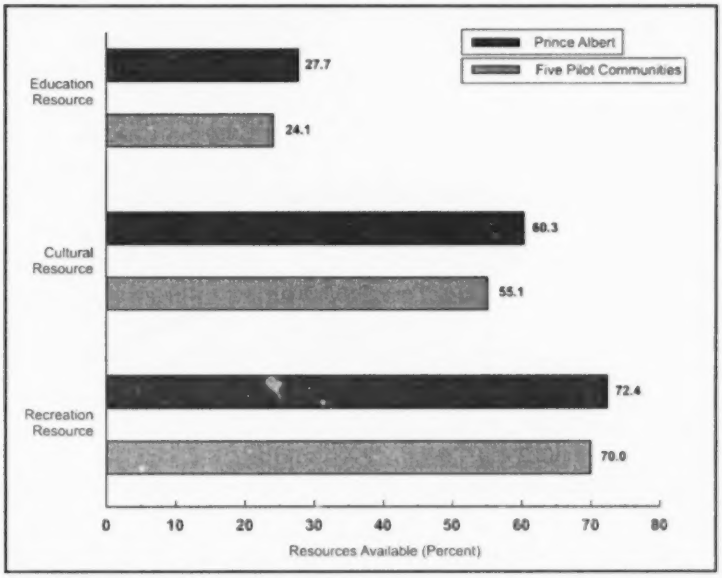
Likewise, Prince Albert families are functioning quite well and have high scores, equal to the average for the 5 UEY communities, on positive maternal mental health. Both indicators of parenting styles were lower than the UEY average, indicating that this may be one avenue for improving children's outcomes.

Figure 4.1 – Community Indicator Scores for Prince Albert




*Source: NLSCY-Community Survey for Prince Albert and national, NLSCY data (cycle 3), 1999-2000*

Figure 4.2 – Availability of Community Resources for Prince Albert and the Five UEY Communities




*Source: NLSCY data (cycle 3), 1999-2000*

As described, there are ten indicators of family and community success. Each indicator scale has a range from 0 to 10, with 10 being a positive score. A total score, out of 100, can be calculated for each community. The total score out of 100 for Prince Albert is 66.7, which is 0.2 points below the average of 66.9 for the five UEY communities.

Since the score on use of community resources was low in all 5 UEY communities, this variable was further explore to determine if

lack of availability was the problem. For educational, cultural, and recreational resources, parents were asked, "Are most of these resources located within walking distance or within a short drive or bus ride?" The results for Prince Albert, presented in Figure 4-2, indicate that availability is an issue for educational resources, but is less of an issue for cultural and recreational resources.

## Community Resources in Prince Albert

The Prince Albert area has an advantage because its people work together – it is something known in the province as the 'PA Advantage.' There is a thirty-year track record of intersectoral collaboration (Nosbush, 2001, p. 5). The community itself has huge capacity as a resource for human development.

"Resources in the neighbourhood support families and neighbourhood residents by complementing their efforts to raise their children well" (Kuzbik, Nosbush & Sutherland, 2001, p. 42). Investigating the links between the quality and quantity of services, and the developmental outcomes of children can assist communities in evaluating the effectiveness of their resources and how to most wisely distribute them (p. 42). The available theories and empirical data indicate that the increased availability of high-quality, appropriate, accessible services will result in enriched experiences; positive developmental outcomes; support, and perhaps strengthening, of existing social network while reducing the incidence of negative outcomes.

Programs can serve a variety of purposes including those that are purely recreational, educational, or those that provide support and intervention when difficulties occur. These programs can increase the quality of life as well as increase the social networks within the community (Kuzbik, Nosbush & Sutherland, 2001, p. 42). Map 13 highlights the resources that are available in the following areas:

- Education,
- Society,
- Health and Wellness,
- Sport and Recreation,
- Entertainment and Culture, and
- Special Interests.

**Map 7** indicates that a large number of the community's resources are located in the midtown business district of Prince Albert. However, the city's population is not concentrated in this area so people, especially children, may experience some difficulty accessing these services. Community resources are available in rural areas, particularly in the towns and villages surrounding Prince Albert, however detailed maps of rural areas are not available.

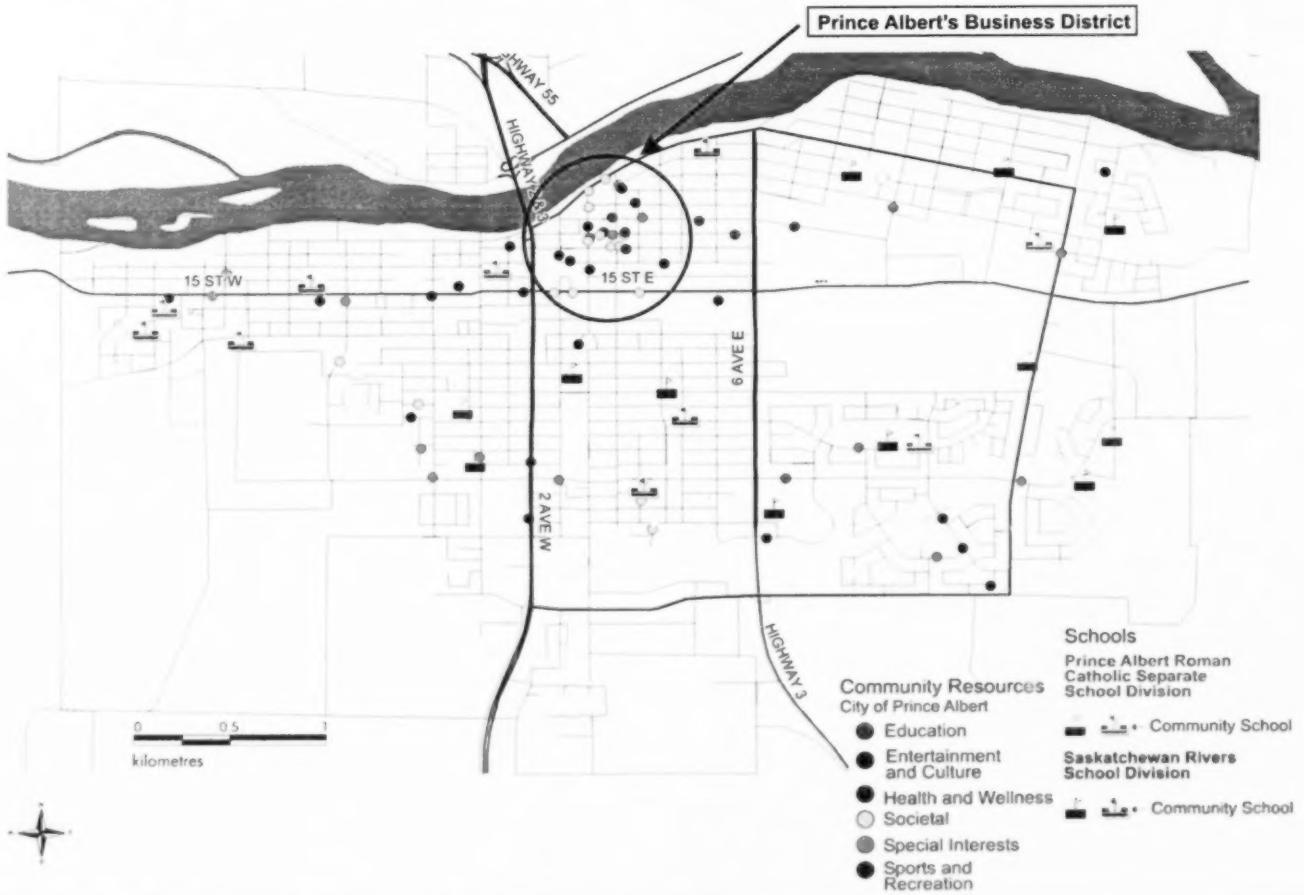
**Map 8** examines the West Flat neighbourhood, one of the most needy areas in the Prince Albert, to illustrate the array of community resources located in this section of the study area.

Note: Maps 7 and 8 have been drawn from the companion study *Understanding the Early Years: Results of the Community Mapping Study for Children of Prince Albert, Saskatchewan.*

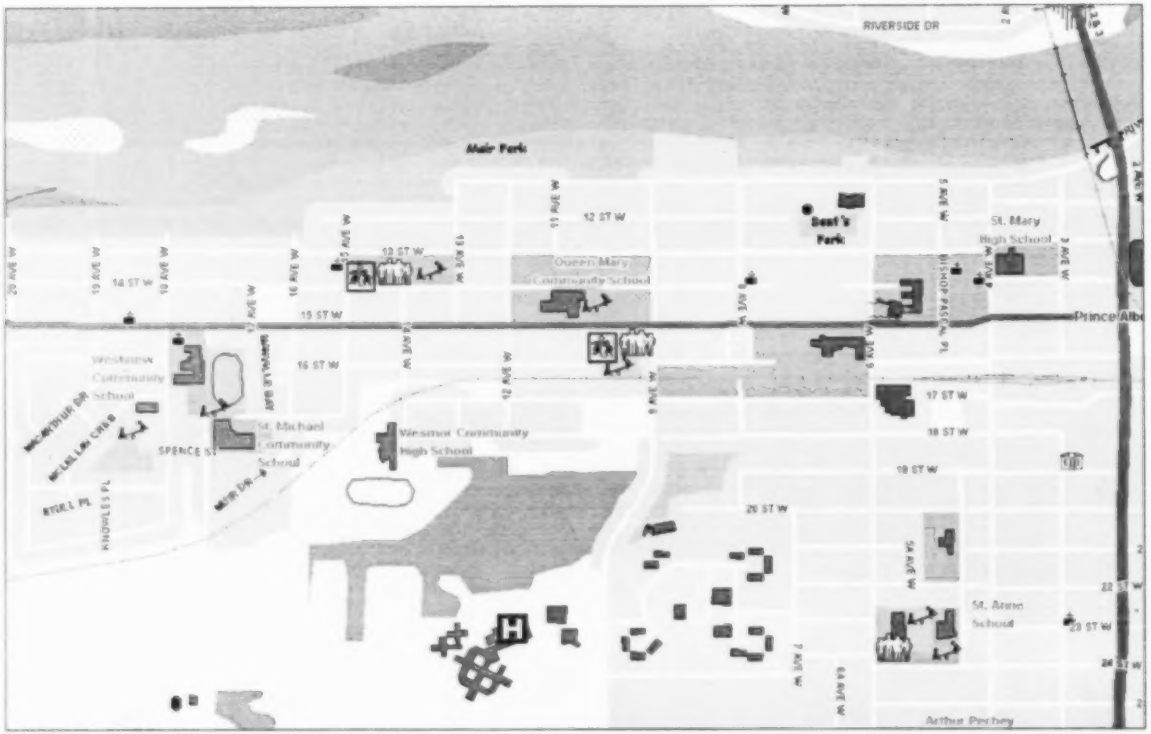
## Child Care

The NLSCY data also covered daycare. Early childhood programs, such as those offered at daycare, can increase a child's readiness for learning, thereby enhancing his or her lifelong academic and personal development.

## Map 7: Where were the community resources located?



# Map 8: The West Flat and Parkland Neighbourhoods




Parks
Major Buildings
Schools

✓ This resource is available in the neighbourhood.

Approximate Population of this neighbourhood: 5,875

What did the Social Index tell us about this neighbourhood?

Number of Potential Risks Present Out of 9

- 7 or more (High Risk)
- 5 or 6 (Somewhat High Risk)
- 3 or 4 (Somewhat Low Risk)
- 2 or fewer (Low Risk)
- No data were available

Selected Neighbourhood Resources

- Museum
- Community Club ✓
- Rink
- Performing Arts
- Day Care ✓
- Library
- Art Gallery
- Swimming Pool ✓
- Playground ✓
- Church ✓

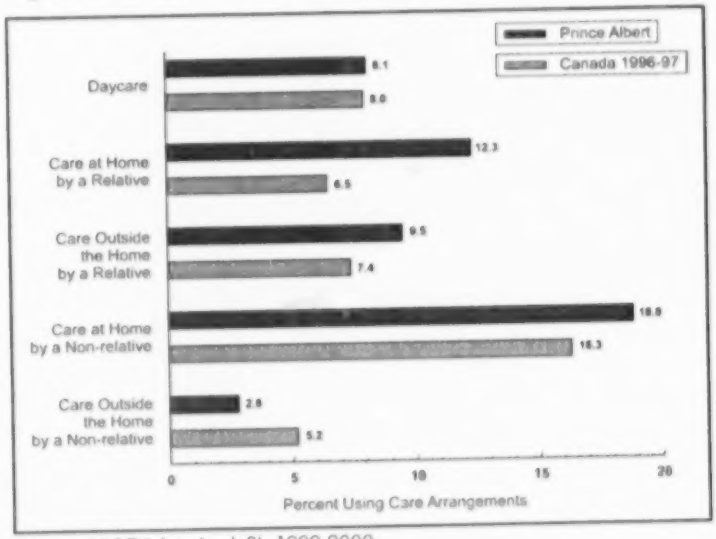
But for these programs to be effective, they need to be developmentally appropriate and responsive to the experiences, backgrounds and needs of the children.[18] Research suggests that, regardless of a child's socio-economic status, four types of resources contribute to optimal child development: childcare centres, pre-schools, nursery schools, and kindergartens.

Research based on the first cycle of the NLSCY suggests that receiving daycare, either licensed or unlicensed, has positive effects on the language skills of children from low-income families. However, children from relatively affluent families tend to fare equally well across various types of care arrangements.[19]

In 1996-97, according to the NLSCY, about one-half (48.4%) of the population of 5- and 6-year-old children in Canada received care for at least part of the day by someone other than their parents. In contrast, 51.5% of the children in Prince Albert received care outside of the home.

Figure 4-3 displays the percentage of children in differing types of care arrangements for Prince Albert, compared with the 1996-97 figures for Canada, derived from the NLSCY. The children in this community were just as likely to receive daycare, compared with children living elsewhere in Canada, and were much more likely to receive care by a relative, either inside or outside the home. About 19% of the children in Prince Albert were cared for at home by a non-relative; this is the most popular type of care arrangement in Canada. Fewer children – 2.8% compared with 5.2% – were cared for outside the home by a non-relative.

Figure 4.3 – Types of Care Arrangements




*Source: NLSCY data (cycle3), 1999-2000*

[18] Doherty, G. (1997). *Zero to six: The basis for school readiness.* Hull, Quebec: Human Resources Development Canada, R-97-8E.

[19] Kohen, D., Hertzman, C., & Willms, J. D. (in press). The importance of quality child care. In J. D. Willms (Ed.), *Vulnerable Children: Findings from Canada's National Longitudinal Study of Children and Youth.* University of Alberta Press.

# VI. Looking Forward

Overall, the children of Prince Albert were healthy and showed strong signs of positive development and readiness for learning. They scored above the comparative sample (EDI-16) on the teacher-based assessments for school readiness for social knowledge and competence as well as communication skills and general knowledge, but below national norms on the direct assessments of literacy and learning skills.

The community had high scores on wider community indicators describing its levels of social support and social capital, and the safety of its neighbourhoods.

Although many Canadian communities share at least some of these broader characteristics, each community also exhibits a variety of unique features that set it apart from others.

This is one of the reasons community-based research is so important. Research allows a community to understand how well its youngest citizens are developing and lends insight into how the obtained results came about. Investments for families and children as well as for children's development can be monitored over time so that effectiveness and efficiency of community effort can be improved.

This community can take pride in the success of its youngest children; however, there is room for improvement. It is important to note that the results for Prince Albert are bi-modal, based on the urban and rural areas. Overall, the rural area consistently scored higher than the urban area concerning the five EDI developmental domains. Nearly 16.3% received low scores on the physical health and well-being and 17.9% on the language and cognitive development domains of the Early Development Instrument; over 21.1% had low scores on the nationally standardized Receptive Language Test (PPVT-R), 23.1% had low scores on cognitive development (Who Am I?), and 13%-19%% also received low scores on the behavioural outcomes pertaining to emotional disturbance/anxiety, and aggression/conduct disorders.

## A. What Makes Prince Albert Unique?

Several features stand out as unique to Prince Albert. First, in many respects, this community could be characterized as relatively disadvantaged in socio-economic terms, but rich in family and community resources. Second, levels of social and community support are high, as is maternal mental health. Third, parents tended to be less engaged with their children in learning activities, compared with other UEY communities.

### Socio-economic Composition

Overall, the level of socio-economic status of Prince Albert is well below national norms, and there are significant portions of the city where families are living in poverty (see Figure 1-2).

### Parenting

The parents of the community had lower than average ratings on the indicators of parenting practices. Earlier research on child development has emphasized the importance of "risk factors" such as low family income, low levels of parental education, and unemployment. Although these factors are correlated with children's outcomes, they are less important than what parents actually *do*

on a day-to-day basis: "what matters most is the kind of family environment a child lives in: the benefits of good parenting skills, a cohesive family unit, and parents in good mental health, far outweigh the negative effects associated with poverty".[20] Parenting practices not only influence cognitive outcomes, they have a strong effect on children's behaviour. Given the low scores on parenting practices of this community, and the relatively high prevalence of children with behaviour problems, the results suggest that many parents would appreciate and benefit from parenting courses and other measures aimed at improving their skills. Many of the parents in this community reported low levels of engagement in learning activities at home, and strategies which help parents become more engaged are likely to help improve children's outcomes.

### Social Support

This community had relatively high levels of social support and social capital, which could be directed towards improving children's outcomes. For example, over one-quarter of the children in this community live in single-parent families. It is especially difficult for these parents to take advantage of community resources that are available. For some of these parents, having a neighbour who takes their child to swimming lessons once a week may be a tremendous form of social support, for others it might simply be having an affordable caregiver.

## B. Summary

Prince Albert is one of the first five communities participating in the UEY Initiative. Through this initiative, valuable lessons are being learned about the needs and strengths of communities with different economic, social and physical characteristics. With respect to early childhood development, we are also learning how they are working to improve children's outcomes, as well as the relative success (or lack thereof) of their efforts.

Communities will determine how their citizens will work together to improve children's early developmental outcomes. Results from the UEY Initiative will inform the discussion in the community for future action.

At the same time, it is a societal responsibility – of governments, educators, community agencies, neighbourhoods and families – to make sure improvements take place for all children. Strategies that require the community to look at itself as a whole community, as well as neighbourhood by neighbourhood, will likely have more enduring effects. UEY is able to provide research results to support both.

For example, neighbourhood by neighbourhood, families may improve their outdoor play spaces, and on a community level, concerned agencies and organizations could improve community-wide strategies to integrate disadvantaged groups. As communities document their efforts as well as their results, effective practices will be identified.

Any community's response must consider its unique features. The importance of a co-ordinated approach involving families, teachers and all community members must be emphasized, because each has been shown to be important in enhancing a child's development. Governments, community institutions, schools and the voluntary sector in Prince Albert must continue to work together, as each can make a valuable and important contribution. Support for families with children from the larger community network is critical.

[20] Willms, J. D. (in press). Implications of the Findings for Social Policy Renewal. In J. D. Willms (Ed.), Vulnerable Children: Findings from Canada's National Longitudinal Study of Children and Youth. University of Alberta Press.

# Appendix A

## Additional Demographic Highlights

### The Physical Environment

Prince Albert, gateway to northern Saskatchewan, is nestled in the transition between the Grasslands and the Northern Boreal Forest. Its proximity to the north has resulted in "the development of processing, manufacturing and tourism industries.[21] The North Saskatchewan River borders the city to the north and was a significant trade route historically. Today, it is the centre of Prince Albert's Winter Festival and during the remainder of the year it provides a range of other recreational and cultural opportunities not the least of which is the set of major walkways along its perimeter.

The proximity of many lakes makes Prince Albert and area a tourist centre. A range of recreational activities are available in these areas and many boast year round residence. The northern most boundary of the study area encompasses the beautiful Prince Albert National Park. A number of the commuters (discussed below) represent families who chose to live in the lakes area and commute to their employment. Although these areas provide a rich resource to the residents of Prince Albert and area, economic and transportation factors do not make them equally accessible to all.

The water is generally of high quality and although there are some concerns about the emissions from the pulp and paper mill just east of the city, the air is generally of good quality. The abundance of forest areas as well as Ducks Unlimited Wildlife Preserves surrounding the city makes this area a habitant for an abundance of wildlife. Coupled with the fishing opportunities available at many nearby lakes, this area is a sportsman's paradise.

Concerning the physical environment, the *Neighbourhood Observation Instrument* indicated that all areas in Prince Albert had either well kept exteriors in good repair or exteriors that were in fair condition; only two of thirty-eight enumeration areas indicated poor conditions with peeling paint and buildings in need of repair. There remain, however, some areas that present growing challenges, albeit they represent less volume than in other major urban centers.

Although the increasing process of urbanization and the concentration of young children in areas with greatest socio-economic challenge pose some serious challenges, the Prince Albert area provides an ideal physical setting for positive development because it provides:

- High quality water and good air,
- Access to a variety of recreational areas,
- Parks and green spaces distributed throughout the city,
- Physical properties that are generally well kept, and
- An economy that is stable and continues to thrive.

[21] Stabler, J.C. and Olfert, M.R. (1998). "Prince Albert Planning Area: Selected Economic and Demographic Characteristics", unpublished work commissioned by the Saskatchewan Department of Education for the Saskatchewan Training Strategy, Post-Secondary Education and Skills Training, Appendix. Hereafter referred to as "op cit".

## Employment

The expansion of the Prince Albert labour force in 1991 created shortages in several types of skilled labour which resulted in employers recruiting and training women in the industrial sector (op cit., p. 26). The peak of expansion passed and several employers have recently reduced the sizes of their labour forces. This has eased somewhat the housing shortage it created, but has also reduced the number of people reporting full time employment.

There are no strongly dominant occupations in the region demonstrating its "well diversified economy" (op cit., Appendix 1). The combined service sectors account for 47% of the labour force as compared to a provincial rate of 42%. Manufacturing, construction and government services also account for a higher proportion of the labour force than the rest of the province (op cit., p. 20). When one considers both the industry and occupational classifications, the Prince Region is "more diversified than most regions in the province and is well-represented in sectors and occupations that are growing" (op cit., p. 21). The data suggests that this area has a varied labour market to meet the needs of its diversified economy.

## Education

The data suggests that the population of Prince Albert does not have a high degree of educational preparation; over half of the population has not had any post-secondary training. This ill equips them to participate in the job market or, at the very least, gives them little flexibility with respect to the type of employment available to them. Furthermore, it means that some young children growing up in this community do not have parents for whom higher education has been a goal.

Stabler and Olfert also note that "the education levels in the region will reflect the occupational and industrial structure of the economy which is actually more highly concentrated in the health and social services and government services industries than the province" (p. 25).

## Justice

The Saskatchewan Penitentiary federal site contains three types of facilities: a maximum security facility called the Special Handling Unit (SHU) that houses 78 inmates, a medium security facility that houses 504 inmates (17 of these are women) and a minimum security facility called Riverbend Institute that houses about 100 inmates (personal communication). The combined operating budget for these facilities is $39 million (Thompson, 2001).

The Prince Albert Correctional Centre is a provincial facility for men that presently has 275 inmates and an operating budget of sixteen million dollars (Thompson 2001). Parole Services has an additional operating budget of one million dollars (Thompson, 2001).

Together these services employe 993 staff and have a collective budget of $56 million. In addition, the federal institution alone provided 123,500 man-hours of community service last year (Thompson, 2001).

In addition to the men's facilities described above there are 4 youth facilities for males, two are open custody and two are closed custody. These institutions have a combined capacity of 65; presently there are 50 residents (personal communication).

Finally, there is a women's correctional facility – Pine Grove Women's Correctional Centre – which is a medium-security provincial institution. It has a capacity of 85, but on average in 2000-2001, there were 59

inmates. These data indicate that 83% of the inmates have a grade 11 or less education and 82% are either Status Indian or Metis. Of the 699 inmates, 694 were unemployed at the time of incarceration (Koczka, 2001, pp. 1–3). Personal communication with staff indicates that only one of the nearly seven hundred inmates of the past year had more than a grade 11 education and was not addicted to alcohol and/or drugs.

## Housing

The number of one-bedroom rental apartments has increased by 83 units over the past three years while two or more bedroom units have decreased by 61. The average rent has increased from 5 to 10% for apartments depending on the size. In 2000 a one-bedroom apartment rents for $424, a two-bedroom for $486 and a three-bedroom for $521 whereas a bachelor suite rents for $309 (CMHC as cited by Prince Albert Housing Committee, p. 27).

## Language

One could argue, and many have cogently done so, that mastery of the mother tongue enables children and adults to learn a second language more readily. From this stance one could posit that it is more advantageous to speak a language other than either official language and then, learn either official language, than it is to speak a non-standard dialect of either official language or have less than good control of the standard dialect.

## Teen Pregnancy

If the rates are compared between 1974 and 1994 (69.4 and 63.0 pregnancies respectively per one thousand women in the same age cohort) Saskatchewan has the fourth highest rate, but is only slightly lower than Manitoba. Only the North West Territories and the Yukon exceed these two provinces in teen pregnancy rates (Schaefer, 1999, p. 5).

Compared to older women, pregnant adolescents experience more complications during pregnancy and delivery. Between 1989 and 1994, Saskatchewan females 15 to 19 years of age experienced 16,142 hospitalizations with 57,539 days of hospital stay whereas females 10 to 14 years of age experienced 323 hospitalizations with 1,275 days of hospital stay (Saskatchewan Institute on the Prevention of Handicaps, p. 52). The rates of hospitalization in the 10 to 14 years of age group were more than five times as high for northern and Treaty-Indian adolescents. For the 15 to 19 years of age group the rate was three times as high as the provincial rate for the northern group, and almost four times as high for the Treaty-Indian group. Rural adolescents experienced the lowest rate at half the provincial level while urban adolescents were four-fifths the provincial rate (p. 53).

The figures for the Prince Albert Health District indicate 992 hospitalizations for females 15 to 19 years of age with 3,543 days of hospital stay and 29 hospitalizations with 89 days of hospital stay for 10 to 14 year olds. (Saskatchewan Institute on the Prevention of Handicaps, p. 232).

# Appendix B

## Social Index

A Social Index was developed by HRDC to provide a general picture of neighbourhoods within the broader community and the relative number of potential challenges they face. It includes 9 variables that describe the socio-economic context of communities encompassing measures in the areas of education, employment, income level and multiculturalism. Four categories were established: low risk (1 or 2 challenges), somewhat low risk (3 or 4 challenges), somewhat high risk (5 or 6 challenges) and high risk (7 or more challenges).

Of the 9 variables only seven are relevant in the Prince Albert area since the proportion of the population speaking neither official language is low as is the proportion of the population that immigrated to Canada since 1991. The Social Index data was not available in many of the rural enumeration areas because of the sparse population. However, in urban neighbourhoods (See Map 6), the Social Index illustrates the high-risk nature of the West Flat, Parkland, Midtown and East Hill neighbourhoods of Prince Albert (Kuzbik, Nosbush & Sutherland, 2001, p. 37).

## Community Resources in Prince Albert

A review of the community resources in Prince Albert and area (Kuzbik, 2000) indicated that there were 10 Agency Programs available including the Public Library's various offerings, preschools including French Immersion, The Prince Albert Literacy Network (especially its *Come Read With Me* program) in addition to the public and separate schools.

The *Community Resources Survey* indicated seven different types of Cultural and Entertainment Resources, including pow wow dancing, music, gymnastics, dance, and several performing arts organizations. There were 37 programs offering Health and Wellness opportunities for children, including the *Early Childhood Intervention Program* for children with developmental delay, and the *Early Childhood Team* at the Therapies Department of the health district that provides integrated case assessment by physiotherapists, psychologists, and speech language pathologists. As well there is a range of other health, nutrition, mental health, emergency and other support services. The YWCA houses the Child Mother Futures Program for pregnant women and their children as well as the Prince Albert Baby SAFE Program.

Presently, there are two emergency shelters available in Prince – The Safe Shelter for Women and Children's Haven. The former provides 15 beds for women and their children in family crisis situations whereas the latter provides shelter for children from 6 to 12 years of age in crisis situations and has 17 beds available (Prince Albert Housing Committee, p. 27). There is no emergency shelter for men although plans are moving ahead through the Indian and Metis Friendship Center to establish such a facility. In 2000, the Department of Social Services paid for 176 hotel rooms for people in emergency situations who had nowhere else to stay and this represents an 89% increase from 1998 (Social Services as cited by Prince Albert Housing Committee, p. 27). These data suggest the problem of homelessness is a growing concern in this area. The Housing Committee ends its newsletter with "many people and many families are only a few steps away from being homeless" to illustrate how many families live very close to the edge of solvency (Prince Albert Housing Committee, p. 28).

There are 23 Societal Programs available including family services, housing, and wellness for women, a Prince Albert Share-A-Meal/Food Bank, Compassionate Friends, a Women's Shelter and a range of Social Services. There were 25 Special Interest Programs available including six preschools, 13 day cares (including one infant day care at the largest public high school), five support programs that offered either support to parents or partially funded other arrangements. Finally, there were 13 different types of programs available in the Sports and Recreation area including skiing, swimming, soccer, hockey, gymnastics and bowling.

## Schools

There are 23 schools in the city, 15 of them are public school and eight of them are Catholic schools. There are 11 rural schools in the public school division. Three of them offer K-12 education, while nine offer K-8 education.

One of the city public schools is a cultural school that offers programs for students 16-21 years of age in order to increase their chances of matriculating. One of the city Catholic schools offers an alternative program for junior high age students but students from both systems attend. Three schools in each school district offer French Immersion Programming. A special program has been jointly established by both systems in one of the city public schools to meet the needs of the severely behaviourally disordered students.

Schools are distributed through the city and rural areas and they are in a position to provide human services to the area's various neighbourhoods or communities. Space is made available to human service providers in order to make those services more accessible.

## Poverty and Nutrition

School nutrition programs are located in those schools identified by the Social Index as having a number of potential challenges. One of the most significant socio-economic challenges for Prince Albert's higher risk neighbourhoods is poverty; "a challenge that makes it more difficult for families to provide sufficient quantity and quality of food for their children" (Kuzbik, Nosbush & Sutherland, 2001 p. 56).

In Prince Albert, the Child Nutrition Subcommittee of the Community Networking Coalition has been addressing the issue of child nutrition for several years. Not only does under-nutrition diminish children's well being, it potentially decreases their human potential as adults. The longer malnutrition persists, the greater the cost to the individual and society.

Poorly nourished children have low energy levels, are tardy or absent more frequently, are apathetic and disinterested, either irritable or hyperactive, exhibit poor concentration, and lack self-esteem and social skills (Kuzbik, Nosbush & Sutherland, 2001, p. 56). Clearly, investment in child nutrition has substantial long-term social and economic benefits.

## Community Schools

The foundation policy document for Community Schools, Building Communities of Hope, provides the following overview: Community Schools are founded upon a tradition of community education, which in turn has its roots in community development. Community Schools build strong relationships with their community members and organizations and work closely with families. Community Schools recognize that the difficulties children experience in school are often the result of circumstances that originate in the home or the community. Their programs take into account the cultural and

socio-economic life experiences of the students and provide the wide range of supports needed for children to learn (Saskatchewan Education, 1996, p. 4).

Of the city schools, five are community schools in the public system and three are in the separate system. Neighbourhoods and communities in Saskatchewan that have identified socio-economic risk factors are eligible for Community school designation that brings with it additional funds to enable the school to undertake community development activities, nutrition programs, integrated human services and a learning program that is responsive to at risk children and youth (Kuzbik, Nosbush & Sutherland, 2001, p. 57).

In the spring of 2001, a high school in each of the school divisions received community school designation from the Ministry of Education. In the fall there will be 10 schools in the city that offer community school services.

There is a 20-year history of community schools in Saskatchewan and in Prince Albert. During this time the two school systems have collaborated extensively. At present, a public school consultant coordinates the Pre-Kindergarten Program in both school systems. The Pre-Kindergarten Program is a program for the most at-risk three and four year olds, and is offered in all the elementary community schools in the province. At present, there are 11 programs offered in 8 schools in the city.

While it is important to note that the Boards of Education and the Government of Saskatchewan have located community schools in the areas of greatest need, the mapping study indicates the need for still more schools to be designated (Kuzbik, Nosbush & Sutherland, 2001, p. 58).

Integrated School-linked Services is a combined initiative of the government and the province's schools designed to be more responsive to the growing numbers of children coming to schools with "complex social, emotional, health and developmental problems" (Saskatchewan Education, Training and Employment, 1994). As part of the Saskatchewan Action Plan for Children this initiative has as its primary goal helping all children participate fully and successfully in school. It does not necessitate that all services are located in schools; rather, it attempts to locate the services in settings that will enhance access and use but ensure that these services will be linked to the school (pp. 3 & 6). This initiative fosters the intersectoral collaboration that is necessary for a social safety net to function optimally.

### Post-secondary Educational Services

There are several post-secondary institutions in Prince Albert: The Woodland Campus of the Saskatchewan Institute of Applied Arts and Technology offers a range of technical and applied programs and also a first years University Arts and Sciences program; the Gabriel Dumont Institute of Native Studies and Applied Research, the Southern Urban Native Teacher Education Program, and the Saskatchewan Indian Federated College which sponsors the National School of Dental Therapy.

## Regional Intersectoral Committee (RIC)

The Prince Albert RIC is composed of representatives from a cross-section of provincial government departments and agencies. The committee's role is to support local, community-based initiatives that use existing resources to deliver integrated programs. In general, its function is to further collaboration and service integration, and it does this by participating in needs assessments, activities associated with

integrated case management, as well as regional and local action in response to the needs of target populations such as young children (adapted from Government of Saskatchewan, 1998). Since it develops and supports local strategies to overcome barriers to interagency collaboration its full involvement will be key to the success of the Understanding the Early Years Research Initiative in Prince Albert.

## Summary

An examination of the social capacity and the resources available in the Prince Albert area suggests that there is:

- Strong social capacity;
- Established patterns of intersectoral collaboration;
- A wide range of programs and opportunities albeit that some may not be accessible due to cost and transportation; and
- Provincial policies and programs that promote responsiveness to the community's needs particularly those of at-risk children.

## Conclusion

The Prince Albert area shows many indicators of economic prosperity as evidenced by the growth of its labour force and manufacturing sector as well as an increase in average income (Stabler and Olfert, 1998).

The province of Saskatchewan is experiencing prosperity that is demonstrated by:

- A decrease in the percentage of children living in poverty between 1989 and 1997;
- An average annual rate of increase of 3.3% between 1992 and 1998 of Saskatchewan's Gross Domestic Product (GDP), the highest rate in the country;
- 17,000 fewer social assistance recipients in the year 2000 than there were five years ago;
- A 53% increase in the value of Saskatchewan's exports between 1990 and 1999 (Government of Saskatchewan, 2000).

The Early Childhood Community Coalition consultation process surfaced the following key issues for prenatals and child up to three years of age: poverty, family adversity including abuse and violence, inadequate parenting, under supported families, nutrition, unsafe physical environments, lack of understanding of the brain story, out of home child care, access to services and supports and special needs services. (Zubkow, 2000, p. 26).

The good news is that this community has the economic capability to continue the work to alleviate these problems. Furthermore, the individual and human service agencies as well as the municipal government are able to work together in an increasingly responsive, collaborative, and purposeful manner. As this community learns about itself and uses that knowledge to stimulate action plans it will be in the early years.

It is easy to get trapped in the specifics so much so that sometimes the global effect of actions is lost. As we proceed, let us keep in mind the words of Thomas Kinkade – the painter of light:

> The influence a work of art can have is limited by its physical existence. If at some point the painting or its reproductions are gone, its influence is gone as well. But a

> human life is a work of art than can reach eternity. Each life has the ability to touch other lives, which in turn touches yet more lives. And so, person by person, generation by generation, a world and a future are shaped (Kinkade, 1999, p. 232-233).

And so family by family, neighbourhood by neighbourhood and community by community let's move forward to create a nation that helps all it citizens realize their promise.